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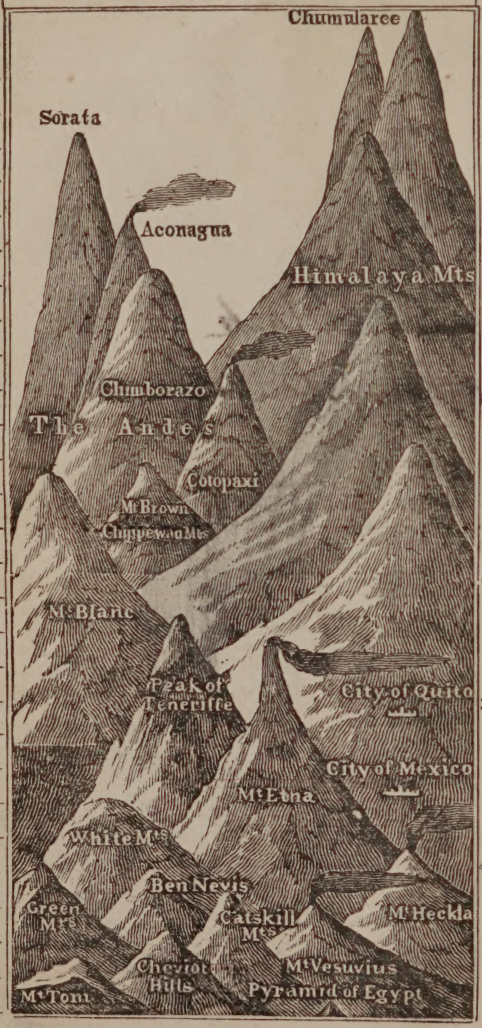
Elizabeth. T. Clark
No 1 Kingston Street

COMPARATIVE VIEW OF MOUNTAINS.



Miles.	Thousand Feet.
5½	29
5	
	25
4½	
4	
	20
3½	
3	
	15
2½	
2	
	10
	9
1½	8
	7
1	6
	5
	4
	3
	2
	1
	0

Ranks.	
1	Hindoo Koosh.
	Sta. Martha.
	St. Elias.
	Ararat.
	Mt. Rosa.
	Moona Loa
2	Mt. Erebus.
	Atlas.
	Pyrenees.
	Lebanon.
	St. Gothard.
	Apennines.
3	Olympus.
	Carpathian & Sinai.
	Dofrafield.
	Black Mts.
	Roan Mt.
	Ural.
	Katahdin.
4	Otter Peak.
	Round Top.
	Hartz Mts.
	Mt. Zion.
	Madrid.
	Highlands of Hudson R.

MODERN

SCHOOL GEOGRAPHY,

ON THE PLAN OF

COMPARISON AND CLASSIFICATION;

WITH

AN ATLAS,

EXHIBITING, ON A NEW PLAN, THE

PHYSICAL AND POLITICAL

CHARACTERISTICS OF COUNTRIES,

AND THE

COMPARATIVE SIZE OF COUNTRIES, TOWNS, RIVERS, AND MOUNTAINS.

BY

WILLIAM C. WOODBRIDGE,

MEMBER OF THE GEOGRAPHICAL SOCIETIES OF PARIS, FRANKFORT, AND BERLIN.

WITH IMPROVEMENTS AND ADDITIONS

FIFTH EDITION

7039.80

HARTFORD:
BELKNAP AND HAMERSLEY.
1847.

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TOPICS FOR REVIEW.

REPETITION and review are among the most important methods of instruction. The table of contents will furnish the means for a general review of this work. The great features of each country may be reviewed by the aid of the following list of topics, either from memory, or by direct reference to the book and atlas. When circumstances permit, it is important to test the student's knowledge of general terms, by requiring him to repeat definitions and descriptions of them minutely.

Review the account of each country, and describe it according to the following list of topics:—

SITUATION.
LATITUDE.
LONGITUDE.
BOUNDARIES.
SEAS, BAYS, GULFS, AND SOUNDS.
STRAITS.
PENINSULAS.
CAPES.
ISLANDS.

SURFACE.
MOUNTAINS.
HIGHLANDS.
TERRACES AND LOWLANDS.
RIVERS.
LAKES.
CANALS.
NAVIGATION.

ZONE AND REGION.
CLIMATE.
SOIL.
PRODUCTIONS.
MINERALS.

CAPITAL.
PRINCIPAL TOWNS.
REMARKABLE FEATURES.
INHABITANTS.
LANGUAGE.
RELIGION.
CIVILIZATION.
GOVERNMENT.
EDUCATION.

AGRICULTURE.
MANUFACTURES.
COMMERCE, EXPORTS AND IMPORTS.

From the Atlas.
Square Miles.
Population.
Population to a Square Mile.

NOTICE TO THE SECOND EDITION.

IN revising this work, the attempt has been made not only to correct the errors to which a first edition, prepared under peculiar disadvantages, is incident, but to render it more simple and complete in the details of its plan, and thus more easy to use both to the teacher and pupil, without making such changes as would embarrass either.

With this view especially, that portion of the work designed for the first course of study has been diminished; the questions (originally made from other maps, while the new maps were in the hands of the engraver) have been carefully revised, with the aid of a skilful teacher, in the daily practice of instruction; and distinct references made to the maps to be consulted.

The engravings have been, to a great extent, renewed and improved. Several have also been added, and especially an outline map of the *German States*, which, it is hoped, will render this "labyrinth of Geography" more intelligible, and a Geographical Clock, which shows the difference of time between Washington and the principal cities of the world.

The table of contents will not only facilitate reference to the work, but, in connection with the topics above given, will render it easy for the pupil to review the whole.

The atlas has been improved by the addition of a Political Map of the United States, Texas, Mexico, and the British Provinces, and several small marginal maps of importance. The Map and Chart of the World have been reëngraved more clearly and correctly; and the remaining maps have been carefully revised, in order to remove obscurities and errors.

A painful course of illness has long delayed the author's labors; but the revision and approbation of every page of the book by skilful and practical men, leads him to hope that it will now be found free from important defects. He is especially indebted to the faithful aid of W. J. Adams, Esq., Master of the Hancock School in Boston.

Entered according to Act of Congress, in the year 1845, by WILLIAM C. WOODBRIDGE, in the Clerk's Office of the District Court of Massachusetts.

R. J. 88a, 2v. 8

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PREFACE.

TWENTY-FIVE years ago, not a school Geography existed in our country, within the author's knowledge, which was fully adapted to the purpose of making a child familiar with the outlines of countries on the maps; and it was deemed necessary to describe every boundary and river in detail, as if the works were written for the blind. No school Geography is known in which a course of comparison and classification was employed, to enable the pupil to understand the resemblances and differences of the various portions of the world — none in which any conception was given of unknown objects and customs by means of engravings, or in which the imagination and memory were aided by emblematical maps, exhibiting the condition of countries, and the comparative size of cities.

The Rudiments of Geography was prepared on a new plan, designed to accomplish these objects. The approbation which it received from the best teachers, and its almost unprecedented circulation, gave ample evidence that it was adapted to the minds of the young, and the wants of our schools. This fact has been confirmed by the involuntary testimony of those who have imitated that work, and by the strong language in which they recommend their books; and their obvious injustice to the original authors only renders this testimony more decisive. Years have passed since circumstances, which it is not necessary to mention here, have forbidden that revision and adaptation of the first work to the new state of the world and of the schools, which were imperiously demanded; and it is in some respects entirely obsolete. Still, there are excellent teachers who prefer using that book, and supplying its defects themselves, rather than employ the more recent, but less thorough works of others, who have adopted the same plan, but have introduced features destructive of its proper influence.

To abandon principles thus fully tested and approved, would be evidently unwise. But the modes of applying them are endlessly various; and twenty years have furnished many opportunities for devising and observing, at home and abroad, new methods of comparing, classifying, and arranging the diversified subjects of Geography. The present work is the result of much reflection and extensive study. It is a new work, with the exception of a few pages which have been retained, and, it is believed, is greatly improved in simplicity and clearness, as well as accuracy.

The first object in view is to give the pupil correct ideas of *things* — of *the Earth itself* — and not merely of *the representations of things* — or of *maps of the Earth*.

The attempt is also made to give distinct conceptions of the Earth as it came from the hands of the Creator, and to classify the various portions of its surface, and the objects upon it, in the new and interesting methods which have given to Physical Geography something of the clearness and beauty of a science. One map of each grand division is therefore entirely devoted to its Physical Geography.

The sources and nature of political divisions, and other changing works of man, are next explained; and in order that the pupil may acquire distinct ideas of these, as mere additions to the works of the Creator, they are

presented on a separate map of each grand division, exhibiting its Political Geography.

At the same time, the various conditions and occupations of men are described, that he may gain clear ideas of the meaning of the words *State, Government, Arts, Manufactures, Commerce,* and *Civilization,* which are so often repeated, like the unknown terms in Algebra, without being understood.

The pupil is not called upon to crowd his mind with separate numbers, — which would occupy his time and thoughts to the exclusion of more certain and valuable knowledge, — which are seldom retained long, and, if retained, must in many cases be soon forgotten, in order to learn new and more correct statements.*

In place of this mechanical use of memory, the attempt is made to teach *the comparative size* of rivers, mountains, countries, and cities — *their rank among others in the world* — and thus to give ideas which are more tangible and valuable, more permanently retained, and less liable to change.

The eye is called in to aid the ear and the imagination, not merely in regard to the situation of places as represented on the maps, but also by connecting with the outlines of countries on the Moral Chart, the darkness — the light — the crown — the star — the cross — the crescent, or the altar, which are the familiar emblems of their state of civilization, government, and religion, both in poetry and painting. The climates of various portions of the world are indicated on another chart by colors, and the situation of plants by lines, which show the extent to which they grow.

In order to save the teacher the perplexing task of selecting what is to be learned at each lesson, the work is divided, by type and numbers, into three parts. That portion which is printed on the largest type, and numbered **I.,** is designed for younger pupils, or the first course of study; that numbered **II.,** is intended to be added to this, for the second course; and that numbered **III.,** in the smallest type, should be added to the others, in completing the third and last course of study. In this manner, the book may be studied, without difficulty, in separate portions. At the same time, all that relates to one subject is given in one place, in its proper order, so that the advanced pupil may study the whole in one continuous course.

In order to render terms and descriptions more intelligible to beginners, a separate course of "Preparatory Lessons" is given, to illustrate the most difficult words and subjects in a familiar way; which it is hoped will be found instructive as well as interesting to those for whom it is designed.

The author is sorry to believe that the works most in use in our schools are, in many respects, adapted to injure the young mind, and lower the standard of instruction, by rendering Geography, to an unhappy extent, a purely mechanical study, and by employing methods which are better adapted to contract and impair the faculties of the pupil than to enlarge and improve them. He alludes particularly to the backward steps that have brought recent authors to the old method of "question and answer" on a subject of science. In this way, "*logic and metaphysics*" were formerly, in the language of compilers, "*made familiar to the dullest mind.*" But most enlightened instructors, in this country and in Europe, consider this method as absurd, in scientific instruction, as the leading-strings and go-carts which were formerly used in teaching children to walk. He refers also to "questions on the maps," which almost nullify their own title, by telling the pupil what is on the maps, with initial and final letters, and thus sparing him the trouble of using his mind or his eyes.

* It is remarkable that minds which have been forced to great perfection in remembering numbers, often lose, to a considerable extent, the power of retaining and acquiring other knowledge.

The author takes this occasion, as a friend of education, to protest against these *stultifying* methods, (if he may be allowed to use a strange but expressive word,) which destroy so much of the benefit of instruction in Geography, and impair, instead of improving, those habits of observation and reflection, on which the success of the pupil in study, and in future life, so much depends.

To those teachers who will excuse the frank advice of one who has made the subject of education a study for many years, he would say, with confidence, that, if they save themselves momentary trouble in this way, they can scarcely fail to embarrass the future progress of their pupils, and perhaps bring dishonor upon themselves, by the evident results of imperfect modes of instruction. He earnestly wishes that the united and firm remonstrances of intelligent teachers may give a different character to our school books, in reference to this important subject.

Instead of pursuing such a course, the author has lost no opportunity of bringing into use an important principle of education — that every child should be taught, not only to receive with docility the directions and instructions of those who are better informed, and to bow with humble faith to the revelations of HIM who alone is acquainted with the invisible and spiritual world, but should also be trained, in all that lies within his knowledge and capacity, to observe, and think, and judge, for himself. Indeed, it seems almost treason against our free institutions to educate one who is to be an American citizen to receive ideas mechanically, especially at that age when the tender mind receives its first, and generally its most permanent, habits of thought and action.

A residence of several years, at different periods, in the Tropical Regions, and in various parts of Europe, has enabled the author to observe extensively for himself; and in London, Paris, Berlin, and other great cities, he has found access to the best materials, the most accomplished geographers, and the most skilful assistants, in the preparation of maps and tables for this and the larger work. While, therefore, it would only betray ignorance of the extent and difficulty of the subject to pretend to absolute accuracy in Geography, he trusts that he has attained a degree of correctness beyond most works of the kind, which have been generally prepared with fewer advantages.

At the moment of beginning to print the Rudiments of Geography, the author met with a striking confirmation of its great principles, in learning that a similar plan had been devised and adopted by Mrs. Willard, the Principal of the Female Seminary at Troy, and employed with great success in her celebrated school. In order to avoid the multiplication of school books, it was deemed advisable that both should unite in support of one set of works, and in preparing a Geography, Ancient and Modern, for the higher schools, of which an improved edition has just appeared. In a former preface, Mrs. Willard remarks, "Of all branches of study which my pupils learn, Geography taught in this manner is that which they most easily call to recollection; and this is the case, whether the examination takes place after the lapse of a few months, or a few years." Her views are explained in the preface to the larger work, to which the author takes pleasure in referring.

New efforts have been made, at home and abroad, to obtain the best views of manners, customs, and objects of interest — not to ornament the book, and please the eye, chiefly, but to *illustrate* and *instruct*. Some of these have been obtained, by permission, from the publisher of Mr. Goodrich's Pictorial Geography. For others, the author is indebted to the liberal proprietor of the Malte-Brun School Geography

TO THE INEXPERIENCED TEACHER.

In commencing, for the first time, a course of instruction in Geography, I trust you will excuse a few familiar and free remarks from one who has long attended to the subject, which may aid you in your labors.

1. The design of this work is to teach *Geography*, or a description of the earth and the objects upon it, and not *map-ography*, or a mere knowledge of the lines and points marked on maps and charts. Begin, therefore, with giving your pupils as distinct ideas as possible of *the things represented*. Thus you should give him some conception of a river as a great body of flowing water, before you point him to the crooked, black lines on the map which merely represent its place and course.

2. Lead him to observe and describe what he sees — to give a sort of geographical account of the place in which he lives, and the objects around him; and he will be better prepared to understand the language of Geography. Then use the Preparatory Lessons, which will give him better ideas of things which he has not seen, and may never see, but which are still important to make the terms of Geography intelligible.

3. Practise him in finding the points of the compass where he is, and the situation of the sun at different hours, until both are familiar.

4. Impress his mind with the idea that *maps* are *mere outlines* and *imperfect representations of things*, to show *their place*, and not *their size*. Teach him, by measuring a few feet or rods, to understand the great distances represented on maps by short lines, and the great size of cities marked by a little circle. Then make him study, before he goes on, the points of compass on the maps, until he can tell them without hesitation.

5. Let him *draw* maps. Begin, for the first lesson, with a small and simple part of a map, such as the state of Connecticut or Spain, and let him draw it on his slate, and mark the place of the capital, and mention and write the names of the countries or waters around it. At the next lesson, let him draw the outlines more carefully, and mark one or two of the prominent rivers and ranges of mountains, and let him add other objects as he learns them, until he can draw the outline without looking at his atlas, and thus fix their situation in his memory.

6. Let him learn only the most necessary and important parts of the introductory chapters, and the first sentences and the first questions on each country, in his first course. He will then get a general idea, which he will fill up easily in a second and third course. The age or capacity of pupils may often require the instructor to omit some parts of the introduction, which are in large type; and his discretion is here the only safe guide.

7. Let him study each Physical Map until he knows every gulf, island, lake, river, &c., *by its shape*, and can point it out on the Political Map. Let him be so familiar with the Political Map that he can point out the situation of every country and great city on the Physical Map. In this way, each map becomes *an outline map* for the other.

8. Do not perplex his mind, or load his memory, with numbers, or even with the ranks of cities, until he is familiar with other things. He will soon forget numbers, and many will be changed before he can make use of them.

9. In the second and third course, call upon him to repeat all that he has learned before, and in every course ascertain that he fully understands geographical terms. The faithful teacher will add numerous and various questions, which there is no room to give in a schoolbook, and which ought to vary with the answers and knowledge of the pupil.

10. In every course, endeavor to make the pupil *think*, and not merely repeat, like a parrot, what he finds in his book.

PREPARATORY LESSONS

IN

GEOGRAPHY.

To Beginners in Geography.

SANTA CRUZ, *January*, 1843.

[1.] GEOGRAPHY is a very pleasant study, if you learn it well; and before you begin, I will try to explain to you some of the hard words.

PICTURES AND MAPS.

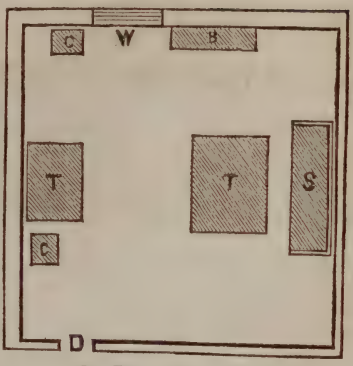
(1) *Picture of my Room.*

[2.] Here is *a picture* of the room in which I am writing, with all the furniture. It is drawn as it would look if the side of the room on my left hand were taken away.

---

1. What is said of Geography? **P. M.** 2. What is the first picture? How is it drawn?

[3.] But if I measure the shape and size of every thing, and then draw the outlines of the room and the furniture, we shall have *a plan or map*, like this.



(2) *Plan of my Room.*

Outlines are the outside lines which mark out the shape of any thing.

D shows the place of the door, W the window, B the bookcase, and S the sofa; T T are the tables, and C C the chairs.

[4.] A map, you see, is not a picture. A map shows the outlines of every thing as it is, and in the right place. A picture shows every thing as it seems to be.

[5.] I am living in a town named *Fredericksted.* It lies on the sea *coast*, or edge of the sea. Here is a picture of a part of it, drawn as you would see it from a ship sailing by.

(3) *Picture of Fredericksted.*

[6.] But if I could fly over it like a bird, or in a balloon, very

3. How can I make a map or plan? 4. Is a map the same as a picture? What, then, does a map show? What does a picture show? 5. What town is mentioned? Where does it lie? How is the picture of it drawn?

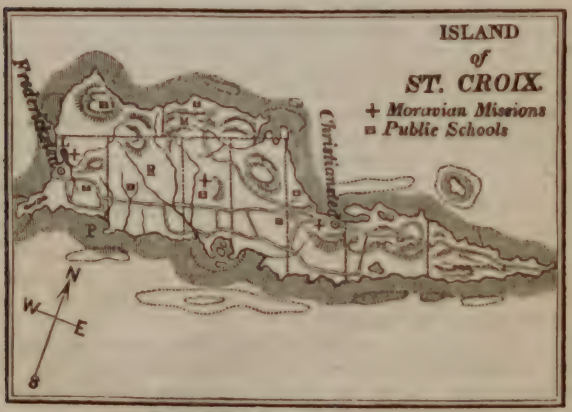
high in the air, I should see only the lines of the streets, and the dark squares filled with houses; and this would make a plan or map, like that you see here, (fig. 4.) which was drawn by measurement.

(4) *Plan of Fredericksted.*

[7.] This town is on a piece of land called St. Croix, or Santa Cruz, only 30 miles long, and 5 or 6 miles broad, which lies in the midst of the wide waters. A piece of land thus surrounded by water is called *an island.*

[8.] From my window, I can see the water spreading out until it seems to meet the sky; and if I go upon a high hill, I can see it all around the island, in a great circle, with only a few dark spots, like clouds, here and there, which are also islands. This body of water is called *the sea.*

LAND AND WATER.



(5) *Map of St. Croix, or Santa Cruz.*

[9.] If I should draw a picture of the island, it would be impossible to draw the houses and trees large enough to be seen; and so I can only show you a map of it.

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6. If I could fly over it, what should I see? What would this make? 7. What land is this town on? How does this land lie? What is such a piece of land called? 8. What can be seen from the window? What can be seen from a high hill? **L. W.** 9. Why cannot I draw a picture of the island in this book? What, then, can I show you?

[10.] In place of the squares and streets of Fredericksted, I have only room to put a little cipher (o), which you see close by the name. At the other end of the island you will see another little cipher (o), which marks the place of another town, named *Christiansted.*

[11.] On each side of Fredericksted, the land bends in as if it had been hollowed out by the water; and near Christiansted, it bends in still more. Such a part of the sea is called *a bay.* A large bay is sometimes called, in Geography, *a gulf.*

[12.] Ships from sea come into the bay, and anchor before Fredericksted; and hence it is called *a seaport.* The place where they anchor is called *a road.* I suppose this is because it is open at both ends, like a road on the land.

[13.] Near Christiansted, you see that a small part of the ocean is almost surrounded by land, and ships can anchor there also. But it is called *a harbor,* because it is almost enclosed or shut in by land, so that ships are sheltered from the winds and waves. *A harbor* is a small, sheltered bay.

[14.] The entrance is called *the mouth of the harbor;* and that of Christiansted is very narrow, because a row of rocks runs before it. Such a row of rocks is called *a reef.*

[15.] Do you see that part of the land on the lower side of the map, near Fredericksted, which stretches out into the sea, and is almost surrounded by water? It is thus made almost an island, and in Geography it is called *a peninsula;* from the Latin words *pene,* almost, and *insula,* an island.

[16.] The point at the end of this peninsula is called *Sandy Point;* and such a point is generally called, by geographers, *a cape.* You see, too, that the end of the island on the right hand is a peninsula, with a cape at the end of it.

[17.] The outside of any thing solid is called *the surface.* Thus we walk on the surface of the earth. Part of the surface of the head is called the face; and so the surface of the land is often called *the face of the country.*

[18.] *The face of the country in Santa Cruz* is uneven. In some places, it rises into hills; and on one side into very high hills, called *mountains.* They are marked on a map by shaded lines, as

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10. How is the place of the town marked? What town is marked on the other end of the island? 11. How is the land on each side of Fredericksted? What is this part of the sea called? What is a gulf? 12. Why is Fredericksted called a seaport? What is the place called where ships anchor? Why is it so named? 13. What do you see near Christiansted? What is it called? 14. What is the entrance of the harbor called? What is there before it? What is a row of rocks called? 15. What do you see on the lower side of the map? What is this called in Geography? 16. What point is at the end of this peninsula? What is such a point called by geographers? What can you say of the end of the island on the right hand? 17. What is surface? What is the face of the country? 18. What can you say of the surface of Santa Cruz?

at M. The hollows between the hills and mountains are called *valleys*.

[19.] In other places, there are no hills; the land is level, and is called *a plain*.

[20.] In some places, water rises in *springs*, from the reservoirs or cisterns which the Creator has formed in the earth. It runs away to the sea in little streams called *rivulets*, or *brooks*. Large streams are called *rivers*.

[21.] Rivers and rivulets are both represented on a map by crooked lines, like that near Fredericksted. (R, fig. 4, p. xi.)

[22.] The rivulet R runs into a low place, where it spreads out into a broad, still piece of water (L), which is called *a pond*, or *lagoon*. Large ponds are called *lakes*.

[23.] Around the lagoon is a spot of ground always wet. It is called *a marsh*, or *swamp*.

TOWNS AND BOUNDARIES.

[24.] A collection of houses built on streets, like Fredericksted, is generally called *a town*. A very large town is called *a city*. *A village* is a smaller place, with scattered houses.

[25.] There are only two towns in Santa Cruz. The people live on *plantations*, or large farms, with only a few houses for the owner and those that work on the plantation.

[26.] The plantations are separated from each other, sometimes by walls, or ditches, or roads, and sometimes only by lines between one stone, or post, and another. All these separations are like the fences round a farm or yard, and are called *boundaries*.

[27.] *Boundaries are marked* on a map by dotted lines. There is not room to mark the boundaries of the plantations on the map of Santa Cruz; but you can see dotted lines dividing the island into nine parts.

[28.] These parts or divisions are called *districts*. In other countries, such divisions are often called *counties*, or *shires*, and sometimes *provinces*, when they are large.

[29.] The double lines mark the *roads* on which carriages can go through the island.

Do you live in a city, or a town, or a village? Do you live on a farm, or a plantation? Can you see the ocean? Is your place a seaport? If it is,

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What are valleys? 19. What is a plain? 20. How does water rise from the ground? How does it run to the sea? What are larger streams called? 21. How are rivers and rivulets represented on the map? 22. What is a pond, or lagoon? What are large ponds called? 23. What do you find around the lagoon near Fredericksted? What is it called? T. E., 24. What is a town? What is a city? A village? 25. How many towns in Santa Cruz? How do the people live there? 26. How are these plantations separated from each other? What are these separations like on a farm? What are they called? 27. How are boundaries marked on a map? Are there any boundaries on this map? Into how many parts do they divide the island? 28. What are they called? What are they called in other countries? 29. What do the double lines mark?

does it lie on a bay? Has it a harbor, or a road? Is there any land near you jutting out into the water, so as to form a peninsula, or cape? Do you live on an island? Are there any hills or mountains near you? Is there any rivulet, or river, or pond, or lake? Have you ever seen a plain? Is there any town, or city, or village near you? Can you describe the boundaries of your farm, or of the town you live in?

[30.] And now that I have given you some account of Santa Cruz, I should like to tell you where it is, and which way I came to it from the United States. But I must first explain to you *the horizon*, and *the points of the compass.*

HORIZON AND ZENITH.

[31.] The line, or circle, where the earth and sky seem to meet, is called *the horizon.* When I was a child, I longed to go to it, and I supposed it was the end of the world.

A CIRCLE is a line drawn round a point in the middle, which is called the centre, and is every where equally distant from the centre, as in fig. 6.

(6) *A Circle.*

[32.] But when I went to the hills and houses that seemed to be in the horizon, I saw other hills and houses beyond it, and another circle around me. I found that the horizon was only an imaginary circle, which took in all that I could see at once, and that I stood in the centre of it. I saw, too, that every place had its own horizon.

The horizon is the boundary, or outside line, of our sight; and in an open place, we can see the same distance every way. Therefore the most distant things we can see must be "equally distant from the centre" where we stand, and the horizon must be a circle. (*See* Fig. 6.)

IMAGINARY is that which seems to be, but is not real.

[33.] When the sun first appears in sight above our horizon, we say it *rises;* when it disappears below the horizon, we say it *sets.*

[34.] The point immediately over our heads is called *the zenith,* and when the sun, or moon, or a star, is on the zenith, we say it is *vertical,* from the Latin word *vertex,* the top.

POINTS OF THE COMPASS.

[35.] That part of the horizon where the sun rises is called the *East,* and the part where it sets is called the *West.* East and West are exactly opposite each other.

H. Z. 31. What is the horizon? What is a circle? 32. What do we find when we go to places which seem to be on this circle? What kind of a circle, then, is the horizon? How much does it take in? Whereabout in it do we stand? Has every place the same horizon? 33. When do we say the sun rises? When do we say it sets? 34. What is the zenith? What does vertical mean?

P. C. 35. Which part of the horizon is East? Which is West? How are East and West with regard to each other?

[36.] If you watch the sun, you will find that at noon it always shines on the same side of the house, or of a post, and that side is called the *South*. The shadow points towards that part of the horizon which is opposite the sun, and that side is called the *North*. So you see that North and South are exactly opposite to each other; and each of them is half way between East and West on the horizon, as in fig. 7.

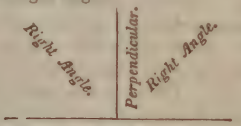
(7) *Chief Points of the Compass.*

In the United States, the sun never shines on the north side of a house, or a tree, in winter, and very little in summer; and so that side is generally the coldest. Hence the moss generally grows thickest on the north side of a tree; and travellers sometimes find out North in the woods by this mark.

[37.] If you draw a line along the shadow of the house, or a perpendicular post, like that in the engraving (8), at noon, it will run exactly North and South. Such a line is called a *noon line*, or, in Geography, a *meridian*, (from the Latin word *meridies*, noon-day,) because the sun will always cast the shadow on it at noon.

(8) *Noon Line.*

PERPENDICULAR means *erect*, or standing straight up, without leaning to one side; so that the angles, or corners, on each side are equal; as in figure 9. The angles are then called right angles.



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We can find out when a post is perpendicular by a plumb-line, or a weight hung on a string; for the weight will always hang perpendicularly to the earth's surface.

36. How does the sun shine at noon? Which way does it cast the shadow? What is the part of the sky called where the sun is at noon? What is the part called towards which the shadow points? How, then, are North and South, with regard to each other? How are they with regard to East and West? How do travellers in the woods sometimes find out North? 37. How can you draw a line North and South? When will the sun cast a shadow along this line? What is it called? What does perpendicular mean?

[38.] If you stand with your face towards the North, East will be on your right hand, West on your left, and South behind you; as in the engraving 8, p. xv.

[39.] Maps are generally drawn so that East is on the right hand, West on the left, North at the top, and South at the bottom of the map.

[40.] If we hang a magnetic needle, or a magnetized piece of steel, on a pivot, so that it can turn round, one end will always point towards the North, and the other towards the South; and so it will always be on a line with the meridian. Such a needle, in a box, forms the instrument called *a compass*.

[41.] A compass is used to point out North, South, East, and West, when we cannot see the sun. For this reason, these points are called *points of the compass*.

[42.] And now I can tell you where Santa Cruz is. When we left the United States to come to Santa Cruz, we sailed from Boston nearly towards the South, about 100 miles a day, and in 15 days we arrived here. This shows that Santa Cruz is 1500 miles south of Boston, and that Boston is 1500 miles north of Santa Cruz. Santa Cruz is one of many islands which are called the West India Islands, or West Indies.

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Boston, *September*, 1843.

[43.] I have now returned to our own country. When we sailed North from the West India Islands, on our way to the United States, we found land extending several thousand miles along the sea. Having landed in the United States, we find that we must travel westward several thousand miles before we can reach the sea on the other side. This land is *America*, and it is as large as 200,000 such islands as Santa Cruz.

[44.] There is one other piece of land, larger than America, and each of them is called *a continent*. America is the *Western Continent*, and contains North America, in which we live, and South America. The other is the *Eastern Continent*, and contains Eu-

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38. If you stand facing the North, which way is East? Which way West? Which way South? 39. Where are East, West, North, and South, on a map? 40. How does a magnetic needle always point? On what line will it always be? What is a compass? 41. How is it used? What are North, South, East, and West called? 42. How must you sail in going to Santa Cruz from Boston? How long does it take to go? How far is it from Boston? Which way? Which way is Boston from Santa Cruz? What are the islands called among which Santa Cruz is? **C.** 43. If we sail North from the West Indies, what do we find? If we go on shore, how far West must we travel to reach the sea again? What land is this? 44. Is there any other piece of land as large? What is each of them called? Which is the Western Continent? What does it contain? What is the other continent called? What does it contain?

rope, Asia, and Africa. We find, on both continents, many high mountains, and large rivers, and great lakes.

How wonderful is the power of the Creator, who made these vast bodies of land, and the sea that rolls its waves around them! and who says to the sea, "Thus far shalt thou come, but no farther!" How kind he is, to water the earth with springs, and lakes, and streams!

SHAPE OF THE EARTH.

[45.] When I saw a ship from my window coming towards Santa Cruz, I could always see her topsails before I could see the hull or body of the ship, as we do the top of a carriage which is coming over a hill. Thus, in the engraving (10), we can, of the most distant ships, see the sails only.

(10) *Ships at Sea.*

[46.] When we sailed from Santa Cruz, we could see the tops of the mountains in the Island of St. Thomas; but we could not see the foot of the mountains and the shore until we came very near. When we reached America, we saw the tops of the hills, and of the lighthouse, before we could see the land on which they stood. It was just as if there were a hill between us and the lighthouse.

[47.] This is because the lower parts are hidden by the bending or curve of the Earth, as in figure 11, p. xviii.

A person on the topmast of the ship represented on the left hand of figure 11, would only see the top of the lighthouse. A person on board the sloop, which is nearer, would see the top of the lighthouse from the hull; but he must go nearer still, before he could see the foot of it. A person on the lighthouse could see only the highest parts of the ship and the mountains.

[48.] Travellers find the same appearance in every part of the

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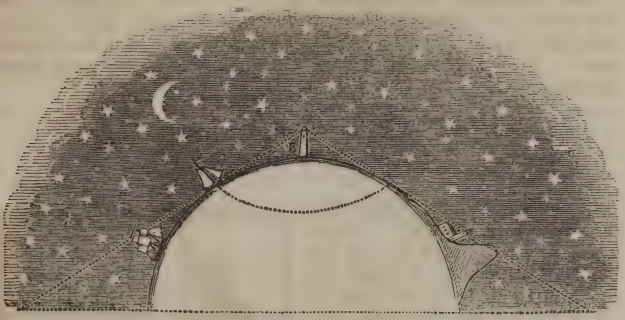
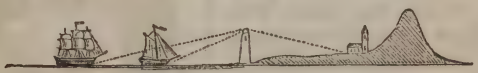
S. E. 45. When a ship comes towards an island, what can be seen first? What next? What is this like? 46. In sailing from Santa Cruz, what could be seen first on St. Thomas? Could we see the foot of the mountains at the same time? What could we see when we reached America? What was this like? 47. Why is this? 48. Is this the case in every part of the Earth?

Earth. This shows that the Earth bends or curves every where, and that it must be round, like *a globe*, or ball.



(11) *Objects on the Earth.*

[49.] If the earth were flat, as it seems to us, we should see the whole of a lighthouse, or a mountain, as soon as we are near enough to see any part of it; as in figure 12.



(12) *Objects on a flat Surface.*

[50.] But we also know that the earth is round, because many travellers have sailed a long time nearly in one direction, and have come at last to the same place again, without turning back; just as a fly does in crawling round an apple.

ATTRACTION OF GRAVITATION.

[51.] Those who sail round the earth, find mountains, and trees, and buildings, and men, standing upright on all sides of it.

[52.] When they come to the opposite side of the earth, they find that they stand there, with their feet opposite to ours, as firmly as at home. The sun and the stars are still over their heads; and every thing they drop falls towards the earth, as it does here.

[53.] This shows us that, as a magnet attracts pieces of iron, the earth draws or *attracts* every thing to itself, and keeps it there,

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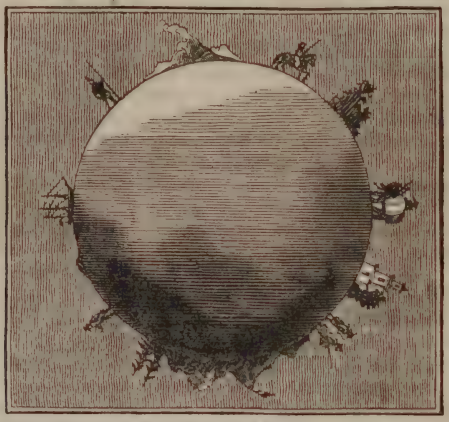
What does this show? What would a person on the topmast of the ship see? What on the sloop? What on the lighthouse? 49. What should we see if the earth were flat? 50. How else do we know the earth to be round? What is this like? **A. G.** 51. What do those find who sail round the earth? 52. How is it when they come to the opposite side? Where, then, do the sun and stars appear? When they drop any thing, where does it fall? 53. What does this show?

as in figure 13. The drawing or attraction of the earth is called *the attraction of gravitation.* This attraction is caused and con-



(13)

tinued by the Creator, who thus holds the earth, and every thing upon it, in its proper place.

PICTURE AND MAP OF THE EAR'TH.

[54.] If we look at a globe, or ball, we can see only one half of it at once. Half a globe is called *a hemisphere.*

[55.] Here is a small picture of one half of the Earth. The darkest parts represent land, and the lightest, water.

[56.] On the left hand, at the edge of the picture, is a part of North America; and the land below it is South America. The light is represented as if the sun or moon were just rising on the eastern part of South America.

(14) *Picture of half the Earth.*

What is this attraction called? How is it caused? **P. M. E.** 54. How much of a globe can we see at once? What is a half globe called? HEMISPHERE *is from two Greek words*, hemi, *half, and* sphairion, *a sphere or globe.* 55. What is the next picture? How are land and water represented? 56. What land is that on the left hand? How is the light represented?

[57.] In the middle of the picture, East of America, is the Atlantic Ocean. This separates America from the land on the right hand, which is a part of the Eastern Continent. The picture shows one hemisphere, as it would appear to a person at a great height above the Atlantic Ocean.

[58.] Here is *a map* of the same hemisphere, which shows us exactly where each part is, and not where it seems to be. You will see a number of lines drawn across it, but they are only *imaginary lines*, from which the places were measured and marked. These lines represent circles which pass round the Earth; but on a hemisphere, we can see only one half of each circle.

(15) *Map of a Hemisphere.*

[59.] The lines or circles from the top to the bottom of the map, or from North to South, represent a few meridians, or noon lines. Every place has its own meridian; but they cannot all be marked on a map.

[60.] When I once sailed from New York on a voyage to London, our watches were right by the sun at noon, in New York. But after sailing eastward a few hundred miles, we found that it was noon in the place where we were, sooner than it was by our watches. When we reached London, we found that noon was five and a half hours earlier there than at New York.

[61.] This is because the sun rises to places that are East of us earlier than it does to us; and must also pass over the noon line of those places sooner than it comes over ours. (*See fig.* 14.)

[62.] *Longitude* is distance East or West from a meridian; and we can always tell what it is, by seeing how much the time of noon changes from one place to another.

[63.] The line E in the middle of the map, running East and West across the meridians, represents the equator. It is so called because it divides the Earth into two equal parts.

[64.] The shorter lines T T represent the two tropics; and the lines P P the polar circles, and we see one half of each of these circles. The tropic and polar circle nearest the north pole, are called the northern; and the opposite, the southern.

[65.] The spaces between these circles are like belts, passing

57. Where is the Atlantic Ocean? Where is the Eastern Continent? How much of the Earth does this picture show? 58. What is this map? What does it show? What lines are on this map? What do these lines represent? How much of each circle can we see on a hemisphere? 59. Which are the meridians? 60. In sailing east from New York, how is the time of noon? How much earlier is noon at London than at New York? 61. Can you explain why this is? Why is it noon sooner than with us? 62. What is longitude? How can we tell what it is? 63. Which of the lines on the map is the equator? Why is it so called? 64. Which are the tropics? Which are the polar circles?

round the Earth, and are called *zones*, from the Latin word *zona*, a belt.

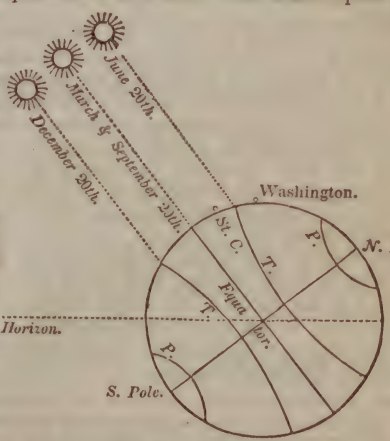
CLIMATES AND ZONES.

[66.] In the picture of my room in Santa Cruz, (p. ix.) you see there are no glass windows, but only shutters; and there are none in the house. The houses here seldom have glass windows; and they have no chimneys, as you see in the picture of Fredericksted, (p. x.) except in the little kitchens in the yards.

[67.] The *climate*, or weather, is so warm that they do not need windows or fires. They have no ice or snow. The winter is as warm as our summer generally is. In the month of January, or midwinter, in Santa Cruz, I was sitting with every door and window open, while you were shivering with cold. I will try to explain to you why this is.

[68.] You know that the sun is always hottest when it is highest, as at noon; and gives the least heat when it is lowest, as at sunrise and sunset. You can see that it is always higher at noon in summer than in winter, as in the next figure, and this makes the summer warm.

[69.] This figure represents the Earth. The little cipher (°) at the top shows where Washington, the capital of the United States, lies; and the cipher on the left hand (St. C.) shows where Santa Cruz lies. The sun is represented in one place high, as it appears in June, or in our summer, when it is over the northern tropic (T); and in another place low, as it appears in December, or in our winter, when it is vertical to the southern tropic.



(16) *The Sun at different Seasons.*

65. What are the spaces between these circles called? **C. Z.** 66. Do you see any glass windows in the picture of my room? What can you say of the houses in Santa Cruz? 67. Why do they not need windows and chimneys? How is the winter there? 68. When is the sun hottest? When does it give the least heat? In what part of the year is it highest at noon? What effect does this have? 69. What does the next figure represent? What does the little cipher at the top show? How is the sun represented in June? How in December?

[70.] When we sailed from Boston, in December, the sun was quite low at noon, and gave very little heat. The trees had lost their leaves; the grass was withered; and the ground was covered with snow.

[71.] As we sailed South, the sun was every day higher and warmer at noon, and soon we could not bear a fire in our cabin.

[72.] In a week we came to a part of the sea crossed by the northern tropic, which is one of the imaginary lines marked on the map of the hemisphere, (page xx.) The heat of the sun was scorching, because the sun was much higher than it is in the United States. The captain told us that he had found the sun vertical, or directly overhead, twice every year, to places on this line, all round the globe, and to all places between this and the southern tropic.

[73.] When we reached land between the tropics, the trees were covered with leaves, and flowers, and fruits; the grass and sugar-cane were green and beautiful; and the breezes were like those of our summer.

[74.] Some of our fellow-travellers who went farther South in midwinter, found the same scorching sun, and summer weather, till they came to the tropic on the other side of the equator. The sun was every where higher than it is in the United States in summer.

[75.] If you look at figure 16, you will see that the sun must sometimes be vertical to every place between the tropics, as it appears to change its place at noon, from June to December, and that it can never be vertical to any other places. For this reason, the climate is hot in countries between the two tropics.

[76.] The zone or belt which passes round the Earth between the tropics is therefore called the scorching or *Torrid Zone.* One half of this zone is represented in figure 17.

[77.] North and South of the tropics the sun is never vertical, and never so high as in the Torrid Zone. The weather, therefore, is not so hot, and the zones between the tropics and polar circles are called *the Temperate Zones.*

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70. How is the sun at Boston in December? How do the trees, and grass, and ground, then usually appear? 71. How does the sun seem in sailing South? 72. What imaginary line is crossed? How was the heat of the sun? Is the sun ever vertical there? 73. What was found on reaching land between the tropics? 74. What can you say of places still farther South? How was the sun there? 75. To what places is the sun vertical? Is it vertical to any other places? What effect has this on the climate between the tropics? 76. Which is the Torrid Zone? 77. How is the sun in the zones North and South of the tropics? How is the climate there? What are they called? 78. How are the sun and weather within the polar circles? What are these zones called?

In Santa Cruz, in the winter, the sun appeared South, and below the zenith at noon, and cast the shadows towards the North, as it does in the United States, though it was much higher at noon. But towards spring, it was higher in Santa Cruz than it ever is in the United States; and in May it became vertical at noon, and my shadow fell between my feet.

On the 20th of June it became vertical to places on the northern tropic; and as Santa Cruz lies South of this tropic, the sun at noon was in the part of the sky North of the island. It then shone into my north window, and cast the shadows towards the South; so that a little boy from the United States could not tell North from South by the sun.

In coming to the United States soon after, we found the sun constantly North of us at noon, and it seemed as if we were going South, until we crossed that part of the sea where it was then vertical, and where our shadows at noon again fell between our feet. But after sailing some distance farther North, the sun was South of us at noon, and our shadows fell to the North, as they do in the United States.

[78.] In the zones within the polar circles and around the poles, the sun is always low, as it is in the United States in the morning, and gives less heat than in other parts of the Earth. Hence these zones have ice and snow for the greater part of the year, and are called the cold or ***Frigid Zones.***

Travellers who have visited the Frigid Zones, have found that even in summer, the sun moves round from East to West in a circle only a short distance above the horizon; and in winter it is hidden below the horizon, for weeks. In some parts of the Frigid Zones, summer is one long day, and winter one long night.

POPULATION AND GOVERNMENT.

[79.] Fredericksted contains about 300 houses, and about 1800 persons inhabit them; so that the town contains 1800 inhabitants, or people. This is called its *population.*

[80.] It is only a small town. The city of New York contains as many people as 160 towns like Fredericksted; and the population of London is 1,800,000, or equal to 1000 such towns.

[81.] A few of the people are white; and they or their fathers came from Europe or North America. But the greater part of the people in the town and on this island are colored; and they or their fathers were brought from Africa as slaves.

[82.] On the plan of the town, (p. xi.) you see at one end a white square. This shows the place of the fort, in which there are soldiers and cannon, to defend the town if enemies attack it, and to compel any who are disobedient, to obey the laws.

[83.] The laws of a country command the people to be orderly, peaceful, and just to each other, and direct those who disobey to be punished. This is what is called *government.*

[84.] The laws of this island are made by the king of a country in Europe called Denmark. Santa Cruz is a colony of Denmark, or a place settled by the people of that country, who are called Danes.

[85.] It is governed by a Danish governor, in place of the king. As a king is also called a monarch, the government is called *monarchical.*

[86.] In our country, the people choose their president, governors, and representatives, who make our laws; and our government is called *republican.*

PRODUCTIONS AND MANUFACTURES.

[87.] The trees represented on the picture of Fredericksted are cocoa-nut trees. The hills are covered with fields of sugar-cane, which look very much like fields of Indian corn; as you will see on the picture of a plantation, in the account of the West Indies, which you will find in another part of the book.

[88.] You will find coffee, and oranges, and limes, and pine-apples growing here, which do not grow in cold climates. These are called *products*, or *productions*, of the island.

[89.] The most important production is sugar-cane. This is produced by cultivating the ground, which is called *agriculture;* and the Africans are employed in agriculture, under the order of masters and overseers.

[90.] The juice of the sugar-cane is made into sugar and molasses, by boiling in a sugar-house, such as you see with a chimney, on the picture of a plantation.

[91.] This is called *a manufacture*, and it is the principal manufacture on this island; for they do not manufacture such articles as cloths, earthen-ware, tools, and other things of iron, tin, and copper, as the people do in Europe and the United States.

[92.] They make much more sugar and molasses here than they can use, and therefore they *export*, or send away, these articles, as well as oranges, cocoa-nuts, and other products of the island, in ships to other countries. Sugar and molasses are the chief *exports* of the island.

EXPORT *is from the Latin words* ex, *out of, and* porto, *to carry.* IMPORT *is from the Latin words* in, *into, and* porto, *to bring.*

[93.] In exchange for their sugar, they *import*, or bring in, from the United States and other countries, the flour of wheat and rye, and other productions of temperate climates; meal from Indian corn, which they do not cultivate; and cloths, earthen-ware, tools, and other articles not manufactured here.

[94.] You will find that different countries have different exports and imports; because they have different productions and manufactures, which they exchange with each other. This exchange is called *trade*, or *commerce.*

GEOGRAPHY.

1. GEOGRAPHY * is a description of the Earth. We should begin to study Geography by observing those parts of the Earth which are around us; and then we shall better understand the description of other parts.

MATHEMATICAL GEOGRAPHY.†

THE HORIZON.

2. *We can see* only a small part of the Earth at once, which *appears, at first sight*, to end in a circle all around us. This circle, in which the earth and sky seem to meet, is called *the horizon.*

3. But *if we go to the most distant place we can see* on the edge of the horizon, *we shall learn* that it is only an imaginary circle, *because* we shall see other places and things beyond it, and a new circle around us. *We shall thus find* that it is only the boundary of our sight; and that every place has its own horizon, of which it is the centre.† See p. xiv.

4. The point immediately over our heads is called *the zenith.* Every place has its own zenith, directly over the centre of its own horizon.

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1. What is Geography? How should we begin to study it? 2. How does the Earth appear at first sight? What is the horizon? 3. Is it a real or an imaginary circle? How do we know this? Is the horizon every where the same? 4. What is the zenith? Has every place the same zenith?

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* The principal subject of each paragraph is pointed out by the words in capital or Italic letters, from which *questions* may be formed; as, What is GEOGRAPHY? How does *the earth appear at first sight?*

† *Mathematical Geography* treats chiefly of the form and mathematical divisions of the earth. *Physical Geography* describes the works of the Creator, as land and water, rivers, mountains, climates, and productions. *Political Geography* describes man and his works, and may be divided into *Civil Geography*, or the account of men, with their occupations and customs; and *Statistical Geography*, or the description of states, with their boundaries, towns, people and resources.

5. When the sun or a star is in the zenith, it is said to be *vertical.* The sun is never *vertical to us* in the United States; but it is nearest to the zenith at noon.

That point of the heavens which is directly opposite to the zenith, and seems to be under our feet, is called *the nadir.*

POINTS OF THE COMPASS.

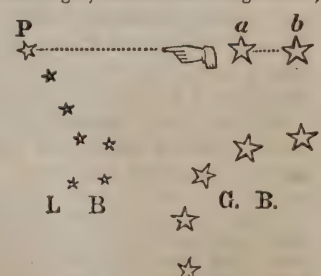
6. That part of the horizon in which the sun rises is called the *East*, and that in which it sets is called the *West.*

7. That part of the horizon over which the sun appears to us at noon is called the *South*, and that part towards which the shadows fall is called the *North.*

The sun never *rises exactly in the East, nor sets exactly in the West,* except at the equinoxes, on the 20th of March and the 20th of September. In the summer, it rises a little North of East, and sets a little North of West. In the winter, it rises a little South of East, and sets a little South of West.

8. There is one star in the heavens, opposite to the place of the sun at noon, which never seems to move, while the neighboring stars all appear to move round it. It is called *the North Star*, because it shows us at night which way is North; and also *the Pole Star*, because it is almost over the North Pole.

On looking towards the North in a clear night, we shall see 7 bright stars, which belong to the constellation called the Great Bear, arranged in a form like that of a dipper, or a plough; as at G. B., figure 18. Two of these (*a* and *b*) are called the pointers, because they point to a small, faint star, — one of seven others arranged in a similar form, — which is the last in the tail of the Little Bear, L. B. This is the Pole Star, marked P. These, with other neighboring stars, appear to move round the Pole Star in regular order, every 24 hours; and in this way, they are sometimes above it, sometimes below it, and sometimes they are on one side of it, as in the figure.

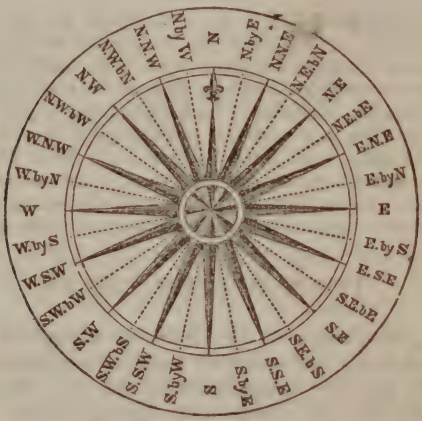


(18) *The Pole Star.*

5. When is the sun vertical? Is the sun ever vertical in the United States? When is it nearest the zenith? **P. C.** 6. What is East? What is West? 7. Which way is South? Which way is North? 8. What star is there which does not appear to move? What point does it show us? What is it called?

9. These four points, North, East, South, and West, (marked N., E., S., W.,) are called *the cardinal points* When we stand with our right hand to the East, West will be on our left hand, North before us, and South behind us.

10. Between these points are *four other principal points* —North-East, South-East, North-West, and South-West, marked N.E., S.E., N.W., S.W.



(19) *Points of the Compass.*

11. *The magnetic needle of a compass* always points North and South, and therefore it shows us these points when we cannot see the sun or the stars. The compass is used by seamen in finding their way across the ocean; and they divide it into thirty-two points, as marked in figure 19. Hence all these are called *points of the compass.*

The points on the right hand of North are read thus: North; North by East; North-North-East; North-East by North; North-East; North-East by East; East-North-East; East by North, and East. To repeat the 32 points is called "*boxing the compass,*" and is often puzzling to beginners.

12. *The course or direction of a place* is that point of the compass towards which it lies, from us, or from some other place mentioned. It is also called its *bearing.*

9. What are the cardinal points? 10. What other principal points between these? 11. How can we find North and South, when we cannot see the sun or the stars? 12. What is the course or direction of one place from another?

13. *The course of a river is named* from that point of the compass towards which it runs. But, on the contrary, *the direction of the wind* has the name of that point from which it comes. Thus a wind blowing from N. to S. is called a N. wind; but the course of a river flowing from N. to S. is said to be S.

QUESTIONS.

Can you tell on which side of the school-house the sun rises? Point with your finger to that side where the shadows fall at noon. Now point to the East — to the West — to the North — to the South.

On which side of the school-house does the road or street pass? On which side does the teacher sit? In which direction is your face turned, when you sit down at your seat? What point is on your right hand? What on your left? What point is behind you? What objects can you see from the school-house towards each point of the compass? What is the course to your own house? Is there a river or stream near you, and which way does it run? Can you tell which way the wind is to-day?

FORM OF THE EARTH.

14. In travelling over the Earth, *we always see the top of a mountain* first; and when we discover a ship on the ocean, we always see *the top-sails*, before we can see the hull or body *of the ship*, as in the engraving, page xvii.

In a clear day, we can see the hull of a ship, or the body of a church, on level ground at the distance of 3 or 4 miles. But if the highest point is 50 feet high, we can see that at the distance of 9 miles; and the top of a light-house or monument, 200 feet high, may be seen at the distance of 18 miles. In the same way, if we go up 50 feet on a hill, we can see the hull of a ship 9 miles; and at the height of 200 feet, we can see it, with a telescope, at the distance of 18 miles. A mountain 5000 feet high may be seen at the distance of 93 miles; and the top of the Peak of Teneriffe, which is 12,000 feet high, has been seen at the distance of 135 miles. In some states of the air, things are seen that are more distant, and are said by sailors to "loom up." This is caused by the refraction, or turning of the light; and images of ships have been seen, in this way, long before they came within the horizon.

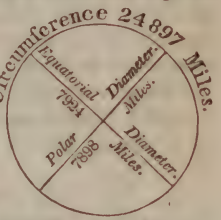
15. *This is because* the lower parts of the mountain or the ship are hidden by the bending or curve of the Earth,

13. How is the course of a river named? How is the direction of the wind named? **F. E.** 14. In travelling over the Earth, what part of a mountain, or of a ship, do we see first? 15. Why do we see the highest part of an object first?

just as the lower part of a house or a carriage is hidden by the curve of a hill. This appearance is the same in all parts of the world; and *it shows us* that the Earth is a globe, or ball.

16. Magellan, and many other travellers, have sailed round the earth, and find that it is about 25,000 miles in circumference, or about 8,000 miles in diameter.

CIRCUMFERENCE is distance round. DIAMETER is distance through the centre. The circumference of a circle, or globe, is about three times the diameter. The Earth is not exactly a globe, but is flattened at the poles; so that the diameter is greatest from East to West, as represented imperfectly in figure 20. *The average diameter* is 7912 miles.



(20) *The Earth flattened at the Poles.*

17. *Travellers find the sun and stars* over their heads, on all sides of the Earth. We see, then, that the Earth floats among the stars, like a bubble in the air; and it can only be kept in its place by the care of the Creator.

18. On every part of the Earth there are men and animals, trees and buildings, as in the engraving, page xix. They are kept there by the *attraction of gravitation*, by which every thing is drawn towards the centre of the Earth, as iron is drawn towards a magnet. The Creator thus holds all parts of the Earth together, and keeps every thing upon it in its proper place.

19. Those who are on the opposite side of the Earth stand with their feet opposite to ours, and are called *our antipodes*, (*an-tip-o-dees.*) But their heads are upwards, towards the starry heavens, as well as ours; and they call us *their antipodes.*

ANTIPODES is from the Greek words *anti*, against, and *podes*, feet.

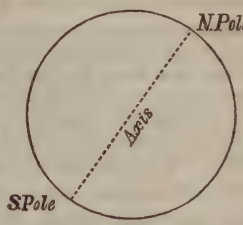
20. Hence we see, that the centre of the Earth, which is between us and our antipodes, is really *the lowest point of*

What is it like? Is this appearance the same in all parts of the Earth? What does it show? 16. What is the circumference of the Earth? How do we know this? What is the diameter? What is circumference? What is diameter? 17. How do the sun and stars appear to travellers on different sides of the Earth? Who keeps the Earth floating among the stars? 18. What do we find on every part of the globe? How are they kept there? What effect has this? Who causes the attraction of gravitation, and why? 19. Who are our antipodes? 20. What is, then, the lowest point of the Earth?

the Earth. Wherever we are, *downwards means* — towards the centre of the Earth; and *upwards means* — towards the starry heavens.

AXIS AND POLES OF THE EARTH.

21. Astronomers have discovered that *the Earth turns* round, like a wheel on its *axle*, once every 24 hours, from West to East. *This causes the sun to appear* to move round over us from East to West; just as, when we travel very fast in one direction, the houses and trees appear to move as fast in the opposite direction.



(21) *Axis and Poles.*

22. The daily motion of the Earth round its axis *gives us day and night* in regular succession; *because* it brings us half the time into the light of the sun, and half the time into the shade.

23. The diameter, or line through the Earth, on which it seems to turn, is called *the axis of the Earth*, and the ends of the axis are called *the poles*, as in figure 21. The pole nearest to the United States, is the North Pole; and the opposite end of the axis is the South Pole.

MERIDIANS AND LONGITUDES.

24. *In order to describe the situation of places on the Earth*, we must use certain imaginary lines, from which we can measure the distance of places, and mark them correctly on maps.

25. A line drawn along the edge of the shadow of a house, or of a perpendicular post, at noon, runs exactly North and South. Such a line is called *a noon line, or meridian*, because the sun will always be over this line at noon. (*See p.* xv.)

What does downwards mean? What does upwards mean? **A. P. E.** 21. How does the Earth turn round? What motion of the sun does it seem to cause? 22. What causes day and night? Why? 23. What is the axis of the Earth? What are the poles? Which is the North and which the South pole? **M. L.** 24. What lines must we use in describing the situation of places on the Earth? 25. What is a noon line, or meridian?

26. As the Earth turns round towards the East, *the sun is over our noon line* after it is noon at places East of us, and before it is noon at places West of us. Every place, therefore, must have its own noon line or meridian.

27. All the meridians meet in the poles, as on the hemisphere, figure 22, forming half circles; and when they are drawn round the Earth, they form entire circles, which are also called meridians.

(22)

28. *Longitude* is distance East or West from a meridian. It was *called longitude* by the ancients, because they supposed the Earth to be longest from East to West.

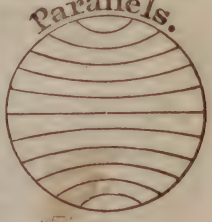
29. *All places lying on the same meridian*, or exactly North and South of each other, have the same longitude, and have noon at the same moment.

30. *Longitude is measured from* some one meridian, which is taken as the first meridian. *On American and British maps*, it is generally measured from the meridian of Greenwich, near London; and sometimes, on American maps, from the meridian of Washington.

EQUATOR, LATITUDE, AND PARALLELS.

31. *The equator* is an imaginary line drawn round the Earth from East to West, half way between the two poles. The line in the middle of figure 23 represents one half of it.

It is called the equator, because it divides the Earth into two equal parts, or half globes, called hemispheres. *The northern hemisphere* is that on which we live in the United States; and *the southern hemisphere* is the opposite half of the earth.



(23)

26. Is the sun over our noon line at the same time that it is noon at places East and West of us? 27. Where do the meridians meet? What circles do they form? 28. What is longitude? Why was it so called? 29. What is said of places lying on the same meridian? 30. How is longitude measured? How on American and British maps? **E. L. P.** 31. What is the equator? Why is it so called? Which hemisphere do we live in? Where is the southern hemisphere?

32. Distance North or South from the equator is called *latitude.* It is measured on a meridian, from the equator each way towards the poles, and is called North latitude or South latitude according to its direction.

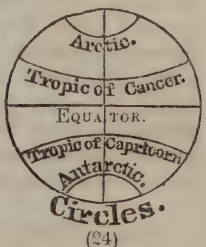
As the ancients supposed the Earth to be longest from East to West, the *breadth* was reckoned from North to South; and they called distance North or South *latitude,* from the Latin word *latitudo,* breadth.

33. North and South of the equator, small circles are drawn parallel to it, and are called *parallels of latitude,* because each parallel marks the latitude of all places through which it passes. The lines across the hemisphere, figure 23, represent the halves of several parallels.

34. *Parallel lines* are those which are in every part equally distant from each other. They may be parallel straight lines ($=$), or parallel curved lines ($\approx$).

35. Two of the parallels of latitude are called *tropics,* one of which is on each side of the equator. The northern is the *Tropic of Cancer,* and the southern the *Tropic of Capricorn.*

36. Two other parallels, which are near the poles, are called *the polar circles. The northern* is called the Arctic, and *the southern* the Antarctic Circle. One half of each of these four circles is shown on the hemisphere, figure 24.



(24)

The tropics are 23 degrees 28 minutes (or about $23\frac{1}{2}$ degrees) distant from the equator; and the polar circles are at the same distance from the poles.

37. *The spaces between these circles* are like belts passing round the earth, and are called *Zones;* as in figure 25, which shows one half of each of these zones. Fig. 26 represents more dis-

(25)

32. What is latitude? How is it measured? 33. What are parallels of latitude? 34. What are parallel lines? 35. What are the tropics? What is the northern tropic called? What the southern? 36. What are the polar circles? What names are given to them? 37. What are the spaces between these circles called?

tinctly the shape of the zones in the Northern Hemisphere.

(26) *Northern Zones.*

38. *The sun gives most heat* when it is highest; as at noon with us, and in countries where it is vertical. *It gives the least heat* when it is lowest; as at sunrise and sunset with us, and in countries where it is always low.

39. *The sun is sometimes vertical,* and generally almost vertical, at noon, to the belt of the Earth, between the two tropics. Hence this is the hottest part of the Earth, and is called the scorching, or *Torrid Zone.*

40. *In the two zones lying between the tropics and polar circles,* on each side of the Torrid Zone, the sun is never vertical. Hence they are not very hot, and are called the *Temperate Zones.*

41. In those parts of the Earth which lie *around the poles,* and within the polar circles, the sun is always low through the day, even in summer. Hence they are covered with snow and ice for the greater part of the year, and are called the cold, or *Frigid Zones.*

MEASURES.

42. *The height of mountains is generally measured* in feet, and *the depth of the sea* in feet, or in fathoms of 6 feet each. *Both are measured* from the level of the sea.

43. *Distances on the surface of the Earth* are generally measured, by the English and Americans, in rods, or in English miles.

A rod is 16½ feet. An English mile is 320 rods, or 5280 feet. A foot is 12 inches, and an inch is equal in length to the black line on the margin, or to the breadth of 7½ of the lines in large type. Most of the people we see are from 5 to 6 feet in height; and it would require 9 men to stand one on the head of another, to reach the top of a house 50 feet high.

38. When does the sun give most heat? When the least? 39. In what part of the Earth is the sun vertical? What climate does this cause? What is this Zone called? 40. Is the sun vertical in the Zones on each side of the Torrid Zone? What are these Zones called? 41. What is the position of the sun within the polar circles? What are these Zones called? **R.** 42. What measure is used for the height of mountains? What for the depth of the sea? From what point are both measured? 43. What measure is used for distances on the surface of the Earth?

44. The length of a mile varies in different countries, so that a German mile is equal to more than four English miles. On this account, geographers of all nations have agreed to measure the latitude and longitude of places, on the Earth and on the maps, in *degrees*.

45. *They divide every circle* into 360 degrees; so that every half circle contains 180 degrees, and every quarter of a circle 90 degrees. In this way, *a degree is always* the three hundred and sixtieth part of a circle, whether the circle be great or small.

46. *Degrees are marked* by a small cipher (°) above the number, thus, 90°. *Every degree is divided* into 60 minutes, marked with one stroke above (′); and every minute into 60 seconds, marked with two strokes (″).

The minutes of a great circle are also called geographical miles. They are chiefly used by mariners, who call them nautical miles, or knots.

47. *Latitude is measured* North or South from the equator to one of the poles, or one quarter of a circle; and therefore can never be more than 90°. On the equator, it is 0°; at the poles, it is 90°.

48. *Longitude is measured* 180 degrees East or West from the first meridian, half round the globe, to the opposite meridian; and in our mode of reckoning longitude, it is never more than 180°.

49. *A great circle* is one whose centre is at the centre of the Earth, and whose circumference is equal to the greatest circumference of the Earth; as the equator and the meridians.

50. *A small circle* is one whose centre is not at the centre of the Earth, and whose circumference is less than that of the Earth; as the parallels of latitude.

51. *A degree of a great circle* is found to be about 69

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44. Is a mile of the same length in all countries? What measure do geographers use? 45. How do they divide every circle? How many degrees in a half circle? How many in a quarter of a circle? What part of a circle, then, is a degree? 46. How are degrees marked? How divided? How are minutes marked? How divided? How are seconds marked? 47. How many degrees from the equator is latitude measured? What is it at the equator? What at the poles? 48. How many degrees is longitude measured? What is the highest degree of longitude in our mode of reckoning? 49. What is a great circle? Mention some of the great circles. 50. What is a small circle? What small circles do we draw on maps? 51. How long is a degree of a great circle?

English miles. Hence the degrees of latitude which are measured on a meridian, are generally about this length.

In consequence of the Earth being flattened at the poles, they vary a little. A degree of latitude at the equator is $68\frac{1}{5}$ miles. In the latitude of England, it is $69\frac{1}{8}$, and in Lapland $69\frac{1}{4}$, according to the latest measurements.

52. Longitude is measured on the equator or on a parallel of latitude. In places on the equator, (which is a great circle,) *a degree* of *longitude* is also about 69 miles; but in going North or South from the equator, it becomes less as the parallels become smaller. (*See fig.* 22, p. 31.)

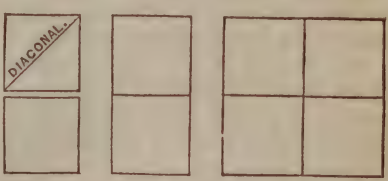
A degree of longitude on the equator is $69\frac{1}{6}$ English miles; in latitude 42°, it is only 52 miles; and in latitude 70°, only 23 miles.

53. *Longitude is sometimes reckoned* in hours. As the Earth turns on its axis 360 degrees in 24 hours, it must turn 15 degrees in one hour. Hence a place 15 degrees *East* of us, will have noon an hour *before* it is noon with us, and a place 15 degrees *West* of us, an hour *after* us.

Mariners find the longitude by means of a correct watch, which keeps the time of noon at the place they left, and shows how long the sun is in going from its noon line to that on which they are. They multiply the hours by 15°, and thus measure in the heavens the distance they go on the earth.

54. *The extent of countries is generally measured* in square miles — that is, by the number of squares measuring one mile on each side, which will cover it. A square mile contains 640 acres.

A square piece of ground of 640 acres, or one mile in length on each side, will make one square mile, as at A, figure 27. A lot of ground, two miles long and one mile broad, will make a parallelogram, or oblong square, containing *two square miles*, as at B. If two miles long and two miles broad, or two miles square, it will contain 4 square miles, as at C.



(27) A B C

If the shape of a country is nearly a square, or a parallelogram, (*oblong,*) we can find the square miles by multiplying the length by the breadth. If it is triangular, or has three sides and angles, (*corners,*) like the half of a square

What, then, is the length of the degrees of latitude? 52. On what circles is longitude measured? What is the length of a degree of longitude at the equator? Is the length of a degree the same in different latitudes? 53. Is longitude ever reckoned in any other way? 54. How is the extent of countries generally measured? How many acres in a square mile?

formed by drawing a diagonal across it, as at D, multiply the length by half the breadth.

Do you know any place which is about a mile from you? Do you know how long and broad the town is in which you live? If you do, how many square miles does it contain? Do you know any field or garden which contains an acre? How many such would make a square mile?

REPRESENTATIONS OF THE EARTH'S SURFACE.

GLOBES, MAPS, AND CHARTS.

55. *The Earth's surface may be represented* on an artificial globe, or on maps or charts.

56. *An artificial globe* is a smooth ball, on which the outlines of sea and land, of rivers and mountains, are drawn just as they are on the Earth; and this gives the most correct representation of the lines on the Earth's surface. Figure 28 shows how a globe is hung, so as to turn in a frame.

(28) *Artificial Globe.*

57. But *on a globe there is only room* to show a few of the rivers, and mountains, and towns; and therefore we are obliged to represent small parts of the Earth on maps and charts.

58. *A map* is the representation of the Earth's surface as it would appear to a person at a great distance above it, as in the moon; and is made by measurement.

It is as if half a globe of iron were hammered down flat, with the same lines upon it, and without making the circle any larger; and so we see that it cannot be so correct a representation of the Earth, as a globe. In this way, the circles and countries near the middle are more pressed together than at the edges, and the parallels of latitude do not appear parallel, as in figure 29, page 37.

59. *If we could look down upon the Earth from the moon, we could see only* one half the globe at once; and,

R. E. S. 55. How may the Earth's surface be represented? 56. What is an artificial globe? 57. Can we represent most of the rivers and mountains on a globe? What, then, must we do? 58. What is a map? 59. How much of the globe could be seen at once from the moon?

(29) *Western Hemisphere.*

of course, we can represent only half the globe on one map. We must, therefore, draw separate maps of each hemisphere, in order to *make a complete map of the world.*

60. *The outlines of the Western Hemisphere,* which contains America, *are represented* above, as they would appear to a person over the equator, on our side of the Earth. On the back of it, on the next page, *the Eastern Hemisphere* is represented, as it would appear to a person directly over it.

61. These maps show how the countries are situated on each side of the Earth; but the hemispheres are commonly placed side by side, that they may be more easily compared, and form a map of the world like that in the atlas.

62. But as we are obliged to *make our maps* by measurement, *we must first draw* the imaginary lines which have

---

How much, then, can be represented on a map? How can we make a complete map of the world? 60. How do you find the Western Hemisphere represented here? How is the Eastern represented? 61. What do they form when placed side by side? 62. What must we first do in making our maps?

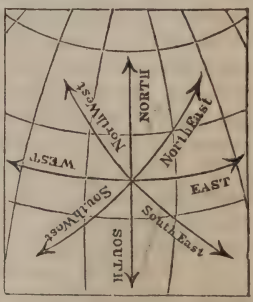
(30) *Eastern Hemisphere.*

been described, (pp. 31 and 32,) and then mark every place according to its direction and distance from these lines.

63. *Every map, therefore, contains* the meridians and parallels, or *the imaginary lines* for measurement, and *the true lines*, which represent the outlines of land and water.

64. *On most maps, the upper part* is North, and *the lower part* South. Of course, *East* is on the right hand, and *West* on the left, as in figure 31.

65. *The meridians are drawn* from the top to the bottom of the



(31) *Bearings on a Map.*

How then proceed? 63. What, then, does every map contain? 64. Which part of the map is North? Which East? South? West? 65. How are the meridians drawn?

(32) *Northern Hemisphere.*

map, and point out North and South; and *the equator and parallels* of latitude are drawn from left to right, and point out East and West. But as these lines are generally curved on the maps, to represent circles on the Earth, *we must trace the points of the compass*, on the same curve, in order to find the true bearing.

Thus, in the Western Hemisphere, on a map of the World, the Azores are South from Iceland, although they appear to be South-East; and Newfoundland is South-West, although it appears to be South. The pupil should examine the points of compass on the map, as in the following exercises, *until he is perfectly familiar with them.*

EXERCISES ON THE MAP OF THE WORLD.

What islands lie S. from Iceland? What cape S. W. from it? What country is E. from Iceland? (*See Eastern Hemisphere.*) Which way is Iceland from the Cape Verd Islands?

[*The most southern point of S. America is Cape Horn.*] Mention some

---

How the equator and parallels of latitude? How must we find the true bearings of places? Give some examples.

(33) *Southern Hemisphere.*

of the places which lie N. from Cape Horn, to the North Pole. What island lies N. W. from Cape Horn?

66. The various *parts of a country*, or divisions of the Earth, are also named according to the points of the compass, as in figure 34, the middle being called the interior.

North-western part.	Northern part.	North-eastern part.
Western part.	Interior, or Central part.	Eastern part.
South-western part.	Southern part.	South-eastern part.

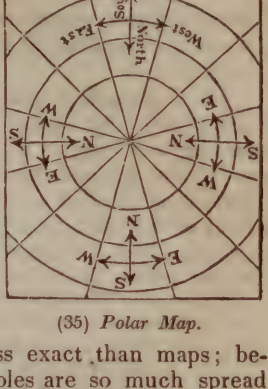
(34) *Parts of a Country.*

67. In map 32, on the last page, *the Northern Hemisphere is represented* as it would appear to a person over the North Pole; and in map 33, on this page, *the Southern Hemisphere*, as it would be seen from a point over the South Pole. These are called *polar maps.*

68. *On a polar map*, when the North Pole is in the centre, as in figure 32, the direction will of course be N.

66. How are the various parts of a country, or divisions of the Earth, named? 67. How is the Northern Hemisphere represented? The Southern? 68. Which are North and South on a polar map?

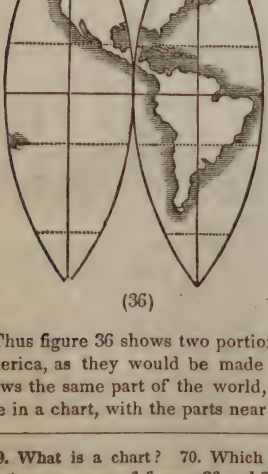
from all sides towards the pole, and S. from the pole towards the sides of the map, as in figures 31 and 35. When the South Pole is the centre, as in figure 33, the direction towards the centre will be S.; and from the centre will be N.



(35) *Polar Map.*

69. *A chart* is a representation of the Earth's surface as if it were spread out on a flat surface, or plain; and the greater part, or the whole of the Earth, may be represented on one chart.

70. *Charts* are in some parts less exact than maps; because the countries around the poles are so much spread out, that they are too large in proportion to the rest.



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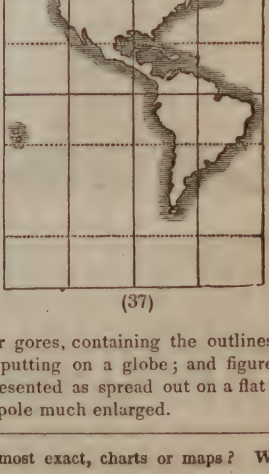

(37)

Thus figure 36 shows two portions, or gores, containing the outlines of America, as they would be made for putting on a globe; and figure 37 shows the same part of the world, represented as spread out on a flat surface in a chart, with the parts near the pole much enlarged.

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69. What is a chart? 70. Which are most exact, charts or maps? Why? What can you say of figures 36 and 37?

71. But *the meridians and parallels on charts* are all straight lines; and therefore charts are more convenient for seamen, in finding the direction and distance of places from each other.

72. *Latitude is generally marked* on the sides of maps and charts; but on the maps of the world it is marked on the circular edge. *Longitude* is marked on the equator, or at the top and bottom of the map. *On a polar map*, latitude is marked on the meridian, and longitude on all sides of the map. (*See* ¶ 68.)

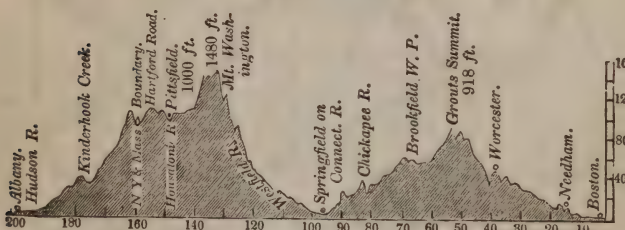
On some maps, the parallels of latitude are straight; but *on most maps, we must follow* the curves of the circles, as in finding the bearings.

If the degrees of latitude on a map or chart increase *upwards*, or towards the North, we know that *the latitude is North.* If they increase *downwards*, or towards the South, *it is South latitude.*

73. *A physical map represents* only the works of the Creator, as land and water, rivers and mountains. *A political map* shows also the works of man; as states, boundaries, towns, roads, and canals.

PHYSICAL is from the Greek word *phusikos, natural.*

PROFILES.



(38) *Profile of the Massachusetts Railway.*

74. *A profile* is a representation of an object as it appears from one side, and is used to show the form and height of the land. Thus the profile, figure 38, of the land over which the railway passes from Boston to Albany, shows us how we ascend and descend in going over it; and the height of the different parts above the level of the sea, at Boston, may be found by the scale of feet at the side. The numbers below show the distances, in miles, from Boston.

71. Why are charts convenient for seamen? 72. Where are latitude and longitude generally marked? How on a polar map? 73. What does a physical map represent? A political map? **P.** 74. What is a profile? For what is it used? Give an example.

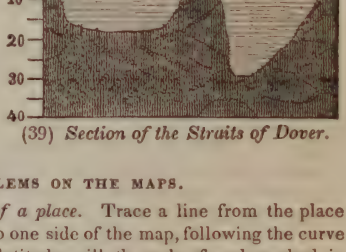
From Boston, the traveller on the railway gradually ascends 918 feet, to the summit above Worcester; and then descends nearly as much to the Connecticut River. He then ascends again from Springfield, about 1400 feet, over Mt. Washington, to Pittsfield; and descends again about as much to Albany.

75. A profile is also called *a section*, because it shows how the land would appear if it were cut through perpendicularly, down to the level of the sea.

SECTION is from the Latin word *sectio*, a cut, or cutting. Thus if a canal were cut through, on a level with the sea, from Boston to Albany, the profile 38 would represent the appearance of one of its banks.

76. Profiles, or sections, are sometimes *used to represent* the bed and depth of the sea; as in figure 39.

The light parts represent the water, and the dark parts the solid bottom or bed of the sea, which has a hill in the middle, and two valleys filled with water on each side of it. The scale on the left shows the depth below the level of the sea, in fathoms, each of which is equal to six feet.



(39) *Section of the Straits of Dover.*

(II.)* PROBLEMS ON THE MAPS.

PROB. I. *To find the latitude of a place.* Trace a line from the place of which the latitude is required to one side of the map, following the curve of the parallels of latitude; the latitude will there be found marked in degrees.

Questions. How do you find latitudes? What is the latitude of Newfoundland? Of Cuba? Of Cape Horn? Of Great Britain? Of the Cape of Good Hope?

PROB. II. *To find the longitude of a place.* Look at the top or bottom of the map, or on the equator, and find the degree opposite the given place, taking care to follow the course of the meridians.

Questions. What is the longitude of Philadelphia, from London? What is that of Mexico from the same place? Of the Sandwich Islands? Of China?

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75. What other name is given to a profile? Why? 76. What are profiles or sections also used to represent?

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* This number is prefixed to indicate that the chapters, or portions of chapters, as well as the remarks, *in small type*, are to be left for a second course of study.

On a polar map, the latitude will be found marked on a meridian, and the longitude on all sides of the map.

PROB. III. *To find a place whose latitude and longitude are given.* Find the meridian of the given longitude, and then trace a line from the degree of latitude on the side of the map. The point where it meets the meridian, will be the position of the place required.

Questions. What place is in latitude 51½° N. and longitude 0° from London? What place is in latitude 0° and about 79° W. longitude from London? What place in longitude 77° W. and about in latitude 39° N.? What in longitude 71° W. and latitude 42° N.? What in longitude 30° E. and latitude 60° N.? What in longitude 118° E. and latitude 39° N.?

PROB. IV. *To find the difference of time between any two places.* Divide the difference of longitude by 15; or count the meridians from one place to the other, on the Chart of the World, where they are drawn every 15 degrees; and you will have the number of hours' difference in their time.

If the place is *East* of the place given, the time of that place is so many hours *earlier* than that of the place given; if *West*, so many hours *later* than that of the place given.

Thus the meridian of Greenland is 30°, or two hours, E. of Philadelphia, and hence the time there is two hours later, or it is two o'clock in Greenland when it is noon in Philadelphia.

Questions. What is the difference of time between Philadelphia and Mexico? What between Philadelphia and the Sandwich Islands? What between Philadelphia and China? What is the difference of time between London and Philadelphia? What between London and China? What between London and Egypt?

PROB. V. *To find the difference of longitude in travelling, when we know the difference of time.* Multiply the hours by 15, or divide the minutes by 4, and you will have the difference of longitude in degrees. If a correct watch is *later* than the true time at the place we reach, we have travelled so many degrees W.; if *earlier*, so many degrees E. of the place we left. It is in this way, by the aid of a very exact watch, called *a chronometer*, that mariners generally find the longitude.

Questions. If a traveller from Philadelphia finds the time, by his watch, two hours later than in the place where he is, what difference of longitude has he made? If a traveller from New York finds his watch 5½ hours too slow after going North-East, where will he probably be? If a traveller from London finds it 4½ hours later, where is he? If it is two hours earlier, in what country of Asia will he be?

ELEMENTS OF PHYSICAL AND POLITICAL GEOGRAPHY.

PARTS OF THE EARTH.

77. *The Earth consists of three parts,* all of which move together, as it turns round its axis; 1st, the solid body on which we live; 2d, the waters which fill its hollows or basins; 3d, the atmosphere or air which surrounds both.

78. *The solid body* of the Earth is a globe; but *its surface* is very irregular. In some parts, it is hollowed into deep basins or valleys, which are filled with *water*. In other parts it is above the level of the water, and forms *land*, which rises into hills and mountains, with valleys between them.

79. But *the greatest height of mountains* is not more than six miles, or the thirteen hundredth part of the diameter of the Earth; and it is not probable that the valleys filled by the sea are much deeper. *All these irregularities*, therefore, are no more on the surface of the earth, in proportion to its size, than the roughness on the peel of an orange.

80. *The water* is collected chiefly in one vast body, called *the sea*, which surrounds the land, and covers two thirds of the surface of the earth; but *a part of it* is scattered in smaller basins, in the midst of the land, or flows through it in streams.

81. *The atmosphere* is the body of air which surrounds the earth, containing the vapors and clouds from which we receive rain. It must move with us, and form a part of the Earth, or we should always feel it striking against us like a violent wind, as we do in travelling fast, in a still day.

82. *The Earth was formed by the Creator to be* the abode of man during a short life, and the school in which he is to prepare for a life that will never end.

83. *The land* is made for his habitation — *the sea* for his reservoir of water and highway over the world — and *the atmosphere* to give him breath, and convey light, and warmth, and refreshing showers; and they are filled with all that he needs for his subsistence and comfort.

P. E. 77. Of how many parts does the Earth consist? 78. What can you say of its solid body? IRREGULAR *means uneven*; IRREGULARITY, *unevenness*. 79. Do these irregularities change the form of the Earth, and why not? 80. What can you say of the water? 81. Of the atmosphere? 82. For what purposes was the Earth formed?

84. *The Creator has made the world a school for man*, by leaving him to use his reason and strength in obtaining the products of the earth, that he may learn industry; and by leaving difficulties and dangers in his way, to teach him perseverance and courage.

When he neglects his duty, or abuses the gifts of God, *he is disciplined* by want or pain, that he may learn to be careful and temperate. But in spite of all his care, he is often left to suffer, and at last to die, to teach him his dependence on the Creator, and to lead him to prepare for a better world; while conscience and revelation are given, to direct him to everlasting happiness.

NATURAL DIVISIONS OF LAND AND WATER.

GREAT DIVISIONS.

85. *Natural divisions* are those which belong to the Earth itself, and are made by the Creator; and these seldom change materially.

86. *In order to describe the sea more conveniently*, the various parts which seem to form its natural divisions, or branches, are called by distinct names. The five largest portions of the sea are called *oceans*.

87. The little Map of the World, figure 40, shows the hemispheres, with the oceans in the middle; and we see *two great oceans* extending from North to South, called the Atlantic and the Pacific Oceans.

(40) *Atlantic Hemisphere.* *Pacific Hemisphere.*

88. These oceans terminate in *two others around the poles*, called the Northern or Arctic Ocean (marked N. O.), and the Southern or Antarctic Ocean.

89. *A branch of the Southern Ocean*, extending northward, forms the fifth ocean, which is called the Indian Ocean.

N. D. L. W. 85. What are natural divisions? 86. What are oceans? 87. What are the great oceans? 88. What two others are there round the poles? 89. What branch is there of the Southern Ocean?

90. In the following map of the hemispheres, with the land in the middle, we see two great portions of land, which are called *continents*.

(41) *Western Hemisphere.* *Eastern Hemisphere.*

91. The continent on which we live, in the western hemisphere, is called *the Western Continent*, and contains North and South America. The other, in the eastern hemisphere, is called the *Eastern Continent*, and contains Europe, Asia, and Africa.

The earth is divided into eastern and western hemispheres by the meridian of the Canary Isles, formerly called the first meridian, which is still used by the German and some other geographers. (*See* ¶ 30.)

92. Around these continents, and in the midst of these oceans, we see many smaller portions of land surrounded by water, which are called *islands*.

The continents are really vast islands, and New Holland is called a continent by some geographers. In this work it is classed among islands.

EXERCISES ON THE MAPS OF THE HEMISPHERES.

Fig. 40 and 41. Which is the largest, the Atlantic or the Pacific Ocean? Which is the broadest? Which lies E. of the Western Continent? Which W.? Which ocean washes the eastern coast of the Eastern Continent? Which the western coast?

What ocean is N. of the Eastern Continent? What of the Western? What is nearly the shape of the Northern Ocean? (*See* fig. 32.) What of the Southern Ocean? (*Fig.* 33.) What branch of the Southern Ocean extends into the Eastern Continent? What grand divisions of the land bound the Indian Ocean on the N., E., and W.? Which of the oceans has nearly the form of the letter S? Which must we cross in going from America to Europe or Africa? From America to Asia or New Holland? Which ocean has the greatest number of islands? Which the least?

Map of the World. Which is the largest of the two continents? Which

90. What are the two great portions of land called? 91. What continent is that on which we live? What is the other continent called, and what does it contain? 92. What other portions of land are there? (Ex.)

is the longest from N. to S.? Which from E. to W.? Which is the narrowest? Which has the greatest number of islands on the N.? Which on the E.?

Which is the largest island on the globe, sometimes called a continent? What others of large size near it? What large ones along the coast N. of these? What large islands on the western coast of the Eastern Continent? What in the Indian Ocean? Which are the largest between the two portions of the Western Continent? Which on the N. E. coast of N. America? (*Iceland belongs to a kingdom of Europe; and Greenland to the Arctic Regions.*)

What group of islands in the Pacific Ocean in the latitude of Cuba, or about 20° N.? What groups in the latitude of Madagascar, or about 18° S.? Mention the small islands in the Atlantic. In the Southern Ocean.

II. — What is the most northern point of the Eastern Continent? What the most southern? Between what latitudes, then, does it lie? Through what zones does it extend? What is the most southern point of the Western Continent? Between what latitudes, and in what zones, does it lie? Between what longitudes from London does the Western Continent lie? What is the difference of time between its extremities? What are the longitudes and difference of time of the extremes of the Eastern Continent?

SUBDIVISIONS OF LAND AND WATER.

(42) *Natural Divisions of Land and Water.*

93. *The boundary between the sea and land* is very irregular. In some places, the land extends into the sea, form-

S. 93. Is the boundary between the sea and land regular?

ing peninsulas and capes. In others, the water indents and divides the land with gulfs, and bays, and other branches of the ocean. *Each continent and ocean appears to form* a body, with many members, or branches, extending from it.

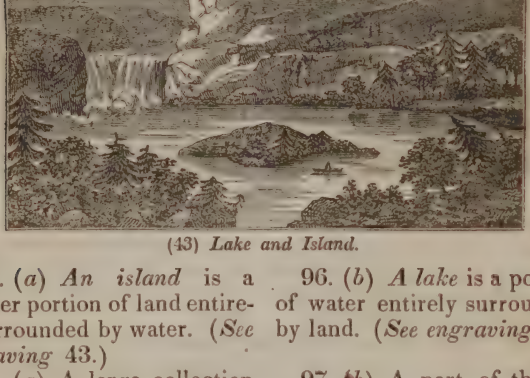
94. The natural divisions of land and water resemble each other in their general forms, as may be seen in the following comparative description. The engraving 42 shows how they are marked on maps.

*Land.**

95. (*a*) *A continent* is one of the largest portions of land on the globe.

Water.

95. (*b*) *An ocean* is one of the largest portions of water on the globe.



(43) *Lake and Island.*

96. (*a*) *An island* is a smaller portion of land entirely surrounded by water. (*See engraving* 43.)

97. (*a*) A large collection of islands is called *an archipelago;* as the Indian Archipelago, or the islands S. E. of India.

96. (*b*) *A lake* is a portion of water entirely surrounded by land. (*See engraving* 43.)

97. (*b*) A part of the sea containing numerous islands *is sometimes called an archipelago;* as the Ægean Sea of Greece.

94. Are the irregularities at all alike? 95. (*a*) What is a continent? 95. (*b*) An ocean? 96. (*a*) An island? 96. (*b*) A lake? 97. (*a*) What is an archipelago as regards the land? 97. (*b*) What as regards the sea?

* Let the definitions be learned in the order of numbers and figures; first 95 (*a*), then 95 (*b*); 96 (*a*), 96 (*b*), &c.

Land.

98. (*a*) *A coast or shore* is that part of the land which lies next the water.

A ship or island near the coast is said to be *on the coast;* or sometimes *off the coast;* that is, opposite to it.

99. (*a*) *A cape* is a portion of land projecting into the water. *The point in which such a projection terminates* is also called a cape.

(44) *Cape Henry.*

Some capes are low, like Cape Henry, on one side of Chesapeake Bay; and some are high, like the North Cape of Europe; as in the engravings.

A promontory is a high cape.

Water.

98. (*b*) That part of the sea which lies near the coast of a country is called *the waters* of that country.

Thus, that part of the sea which lies within 9 miles of the shore of the United States, is called "*the waters of the United States.*"

99. (*b*) *A bay or gulf* is a portion of water extending into the land, with a broad opening.

(45) *North Cape.*

In Norway, a small bay or gulf is called a *fiord;* in Scotland, a *frith,* or *loch;* and in Ireland, a *lough;* but *loch* and *lough* are also used for lake.

100. *These names have been frequently given* to different portions of land and water by mariners and travellers, who were not exact; and we find that the names do not always agree with these descriptions.

Thus, Hudson's Bay is a large portion of an ocean almost surrounded by land, and as truly a sea as the Mediterranean. The Red Sea is often called the Arabian Gulf. We must, therefore, study the maps before we can understand the mode of using these names.

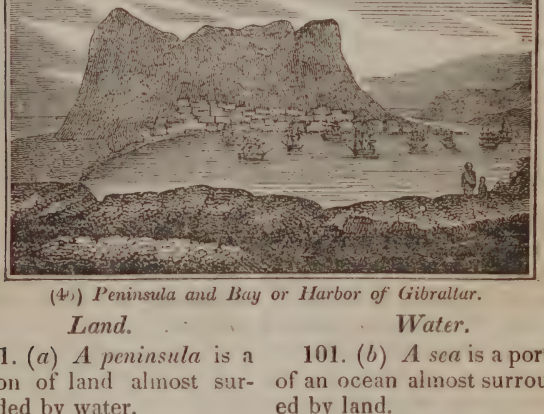
98. (*a*) What is a coast? 98. (*b*) What are the waters of a country? 99. (*a*) What is a cape? What is a promontory? 99. (*b*) What is a bay or gulf? What are small bays sometimes called? 100. Have these names always been given with exactness?

EXERCISES ON THE MAPS.

What continents do you find on the Map of the World? What oceans? What are some of the islands named on that map? What archipelago, or large collection of islands, do you find between North and South America?

What lakes do you find on the Physical Map of North America? What country is on the coast of N. America, on the Atlantic Ocean, or the eastern coast? What is the most eastern cape of N. America? What bay is near it? What is the most western cape? What seas and gulfs do you find on the map?

SUBDIVISIONS — *continued.*



(46) *Peninsula and Bay or Harbor of Gibraltar.*

Land.

101. (*a*) *A peninsula* is a portion of land almost surrounded by water.

Water.

101. (*b*) *A sea* is a portion of an ocean almost surrounded by land.

The whole body of salt water on the globe, is called *the* sea, and not *a* sea.

A salt lake is often called a sea; as the Caspian Sea.

102. *A harbor* is a small sheltered bay, or little sea, where ships may anchor.

The engraving 46, shows the Rock of Gibraltar, on a peninsula enclosing a bay or large harbor. The southern point on the right is called Cape Europa. The land opposite is Africa; and between them are the Straits of Gibraltar.

Ex. 101. (*a*) What is a peninsula? 101. (*b*) What is a sea? What else is called a sea? 102. What is a harbor?

Land.

103. (*a*) *An isthmus* is a strip or neck of land, connecting a peninsula with the main land, or uniting one portion of land with another.

106. (*a*) *A road on the land*, is an open passage for travellers.

107. (*a*) *A river* is a stream of water flowing through the land.

108. (*a*) A stream which flows into, or out of, another stream, is called *a branch.*

109. The deepest part of a river is called *the channel.*

Rivers are marked on maps by crooked lines, which are smallest where the rivers *rise*, or begin to flow, and largest where they *empty*, or flow into some other body of water.

Water.

103. (*b*) *A strait* is a passage of water, connecting one sea or portion of water with another. It is often called *the straits.*

104. *A channel* is a large passage of water between two portions of land.

105. *A sound* is a passage of water which is usually smaller, and more shallow, than a channel.

106. (*b*) *A road in the sea* is an open passage, where ships may pass and anchor. It is sometimes called a *roadstead*, or *roads.*

107. (*b*) *A current* is a stream of water running through the sea.

108. (*b*) A current which flows into, or out of, another current, is also called *a branch.*

EXERCISES ON THE MAPS.

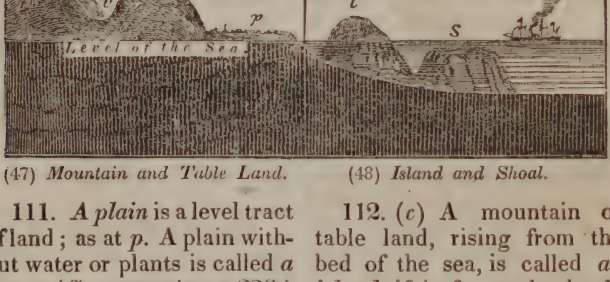
What peninsulas do you see on the Physical Map of N. America? What isthmus on this map, and what portions of land does it unite? What sea lies S. of N. America? What straits W. of N. America? What seas do you find on the Physical Map of Europe? What straits? What channels? (*On the Map of Europe, the passage from the Cattegat to the Baltic Sea, is called "The Sound."*) What sounds can you find on the Physical Map of the United States?

103. (*a*) What is an isthmus? 103. (*b*) What is a strait? 104. What is a channel? 105. A sound? 106. (*a*) What is a road on the land? 106. (*b*) What is a road in the sea? What is it sometimes called? 107. (*a*) What is a river? 107. (*b*) What is a current? 108. What is a branch? 109. What is the deepest part of a river called? How are the different parts of rivers marked on maps? (Ex.)

SOLID BODY OF THE EARTH.

110. *The solid body of the Earth lies* under the sea, and forms its bed or bottom. It also rises above the sea, and forms the land. *In both parts* its surface is uneven, with mountains, valleys, and plains, which receive different names, according to their situation.

On the Land. *In the Sea.*



(47) *Mountain and Table Land.* (48) *Island and Shoal.*

111. *A plain* is a level tract of land; as at *p*. A plain without water or plants is called *a desert*. (*See engraving*, p.329.)

112. (*a*) *A mountain* is a very high hill, or one of the highest points of land; as at *m*.

112. (*b*) *A table land* is a high plain, or the flat top of a mountain; as at *t*. It is also called *a plateau* (*plat-toe*).

Deserts are generally sandy, and are marked on maps by small dots.

112. (*c*) A mountain or table land, rising from the bed of the sea, is called *an island*, if it forms dry land; as at *i*.

112. (*d*) If it is near the surface, but is covered with water, it is called *a bank, shoal*, or *rock*; as at *s*.

Several rocks together form *a reef*.

Banks generally consist of sand, and are marked on maps by small dots; as in fig. 42, p. 48.

S. B. E. 110. What lies under the sea? Has the solid body of the Earth a regular or even surface? 111. What is a plain? A desert? 112. (*a*) What is a mountain on the land? 112. (*b*) What is a table land? 112. (*c*) What name is given to mountains and table lands rising from the bed of the sea, above the water? 112. (*d*) What name is given when they are partly covered with water? What is a reef? How are deserts and banks marked on a map?

On the Land.

113. When a mountain extends for some distance without interruption, like the roof of a house, it is called *a ridge.*

114. (*a*) Several mountains or ridges, in one line, are called *a range* or *chain.* (*See the Andes*, p. 240.)

114. (*b*) When mountains are clustered together, they are called *a group.* A group, in which several chains or ridges meet, is called *a knot.*

114. (*c*) A land covered with mountains is a *mountain land.*

115. (*a*) *A volcano* is a mountain which throws out fire or smoke, or shows other marks of internal fire. (*See engraving for Italy*, p. 289.)

116. (*a*) *A valley* is the hollow between two hills or mountains. A valley surrounded by high lands is called *a basin.*

117. (*a*) *Some rivers run* in narrow valleys; but *rivers with many branches* occupy a basin. *The basin of a river* is the country which contains a river and its branches; as, *the basin of the Mississippi.*

In the Sea.

114. (*d*) *Islands are arranged*, like mountains, in ranges, chains, and groups. A mountain land in the sea, forms an archipelago.

115. (*b*) A burning mountain on the bed of the sea is also called *a volcano.*

116. (*b*) Hollows in the bed of the sea are also called *valleys* or *basins.*

On the land, valleys and basins often form the beds of rivers and lakes.

117. (*b*) *The country around a bay or sea* usually forms a basin, which takes the same name; as, *the basin of Hudson's Bay.*

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113. What is a ridge? 114. (*a*) What is a range or chain of mountains? 114. (*b*) What is a group? What is a knot? 114. (*c*) What is a mountain land? 114. (*d*) How are islands arranged? 115. (*a*) What is a volcano on land? 115. (*b*) What on the sea? 116. (*a*) What is a valley on the land? 116. (*b*) Is there any thing like this in the sea? What is a basin? 117. (*a*) How do rivers run? What is the basin of a river? 117. (*b*) What is the basin of a sea?

On the Land.

118. A declivity is the sloping side of a mountain, or the slope from high land to low land, or towards the sea.

Mountains and valleys are represented on maps by shaded lines coming to a point, as in fig. 42, p. 48.

119. *Rivers begin to rise* in high lands, and *flow down* the declivities towards the sea. Hence we may generally consider the places where the rivers rise as the highest parts of the country; and the declivity descends, or *the land slopes*, the same way that the rivers run.

EXERCISES ON THE MAPS.

What chain of mountains do you find on the Physical Map of North America? What bank or shoal on the north-eastern coast? What long chain of mountains do you see on the Physical map of S. America? Which way do the great rivers run from it? Which way, then, is the longest slope or declivity? Do any rivers flow towards the W.? [*The western declivity of the Andes is very narrow, and the rivers are generally too small to be drawn on the map.*]

THE SEA.

120. *The sea* covers two thirds of the surface of the Earth, and is the great reservoir of water upon it. It is also the highway for thousands of ships engaged in commerce, that is, in carrying merchandise from one country to another. Hence its description is an important part of Geography.

121. *The water of the sea* is salt, and is thus preserved from corruption; and on account of its saltness, it is not frozen so soon as fresh water.

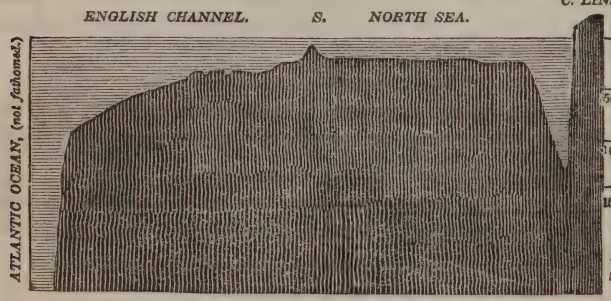
122. *The surface of the sea* is generally level. It is made uneven only by the waves, which never rise more than 20 or 30 feet above its common level. The motion of the waves resembles that of a forest, or of a field of grain, waving backward and forward with the wind.

123. *The depth of the sea* is different in different parts: and its bed is evidently uneven with hills and valleys,

118. What is a declivity? 119. How do rivers begin to rise and flow down? How can we know which way the land slopes? Ex. S. 120. How much of the Earth is covered by the sea? 121. What can you say of the water of the sea? 122. What of its surface? What is the rising and falling of the waves like? 123. What can you say of the depth of the sea?

mountains and plains. The tops of the mountains sometimes appear above the water, in the form of rocks, shoals, and islands; and in most parts of the sea the depth of the valleys cannot be sounded with the longest line.

The greatest depth yet sounded is 36,000 feet, or nearly 7 miles; but soundings at great depths are uncertain, on account of the under currents, and the increased density of the water, which prevent the lead and line from sinking regularly.



(49) *Section of the North Sea and English Channel.*

The preceding section of the North Sea, from C. Lindesnaes, (*C. Lin.*,) in Norway, through the Straits of Dover and the English Channel, to the edge of soundings W. of C. Finisterre and S. of Ireland, shows the varying depth in these waters, and the deep chasm on the coast of Norway. The letter *S.* indicates the same shoal in the Straits of Dover, which is marked on the section *across* these straits, (page 43,) where we see two valleys of different depths, divided by it.

(XI.) * The Sea — *continued.*

124. *In traversing an ocean*, we may often sail for weeks, and even months, without seeing land, encompassed continually by a wide circle of water, bounded only by the sky.

125. We shall sometimes find ourselves driven forward, by *a current* which resembles a river in the midst of the ocean; and not unfrequently is of a different color and temperature from the rest of the water.

126. *In the Torrid Zone*, two great currents cross the Atlantic and Pacific Oceans from East to West; and when they strike the land, send off branches to the North and South, which carry warm water to colder regions.

(XI.) S. 124. In traversing an ocean, can we always see land? 125. What currents do we find? 126. What currents in the Torrid Zone?

* For the second course.

127. *Two other great currents* of cold water flow from the poles, and unite with the returning equatorial currents in carrying cool water to the hot regions. Besides these, many smaller currents are found in various parts of the ocean.

128. On approaching the land, we perceive that the sea rises in *tides*, twice every day, in some places to a great height, and falls as often below its common level.

Tides are caused by the attraction of the moon. They are highest in any place when the moon has just passed the meridian of that place, or the opposite meridian; and lowest, when it is nearly rising or setting. Hence they are 50 minutes later every day, as the moon comes so much later to the meridian.

129. On an open sea-coast, and especially in the middle of the ocean, *the tides* seldom *rise* more than a foot, or at most a few feet. But in narrow bays or passages, they often rise from 10 to 70 feet; and in the Bay of Fundy, they sometimes rise so fast as to carry off cattle.

130. *At first thought, the ocean may appear* like a useless waste of waters, which might have been covered with fertile, inhabited countries. But further reflection will show us the wise purposes for which it was formed by the Creator.

131. *By its saltness and unceasing motion*, the sea is made an incorruptible reservoir, to preserve the water, which flows from the land; and *sends back this water*, in vapors and clouds, to refresh us with rain, and preserve the life of plants and animals. At the same time, it forms one vast *mine of salt*, spreading over the world, from which large quantities are obtained for the use of man.

132. It is neither so hot in summer nor so cold in winter as the land; and therefore *the winds which blow from it* cool the land near it in summer, and warm it in winter. *Its currents* also carry heat from the warm regions to the cold, and bring back refreshing coolness to the hotter parts of the earth.

133. *The sea abounds with* fish, which furnish vast quantities of food for man; and with animals, which supply us with oil and other useful articles.

134. *But the sea is also of great value to man*, in furnishing a highway for ships, which carry abroad the products of each country, and bring back in exchange the valuable products of other countries, and the useful knowledge of all nations.

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127. What two other great currents? 128. What do we perceive on approaching land? 129. How high do the tides rise in different places? 130. How does the ocean appear at first thought? Is this true? 131. What is the use of its saltness? How does it supply the land with water? What useful article do we obtain from it? 132. Is it warmer or colder than the land? What effect has this? What effect have the currents? 133. What food does the sea furnish to man? What other useful articles? 134. How else is the sea very useful? What is commerce?

THE OCEANS.

135. *The waters of the sea* occupy five principal basins, and *are* thus *divided* into the five great oceans already mentioned — the Atlantic, the Pacific, the Northern, the Southern, and the Indian Oceans.

136. *The Northern or Arctic Ocean* lies almost in a circle around the North Pole, between the northern coasts of the two continents. It extends about 3,000 miles, from Beering's Straits — which connect it with the Pacific — to the broad passage which unites it with the Atlantic; and *contains* numerous islands.

137. *The Southern Ocean lies* around the South Pole, in a circular zone about 5,000 miles in diameter, extending to Cape Horn, the Cape of Good Hope, and New Holland. *It contains* a considerable number of islands, and it *is now supposed to embrace* a southern continent.

138. *Near the poles, these oceans* are covered with ice. In latitude 70°, there is usually *floating ice* at all seasons. In latitude 80°, in the Northern Ocean, and 74° or 76° in the Southern, we meet with those vast, *immovable fields of ice* which seem like continents, and which no ship can pass through.

139. Hence these oceans are of little *value for commerce;* but *they abound with* the whale, the seal, and the walrus, whose oil and other products supply the inhabitants of the land with food, and light, and clothing.

Besides the oil which all these animals yield, the skin of the seal is a valuable fur; the mouth of the whale furnishes what is called whalebone; and the tusks of the walrus resemble ivory. These articles are much used in America and Europe.

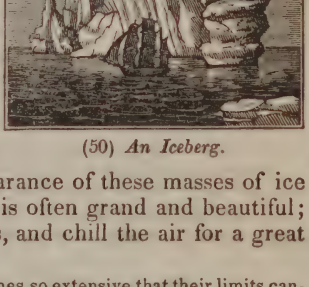
140. *The Indian Ocean* lies in the Torrid Zone. It extends 6,000 miles from West to East, between Africa and New Holland, and about 4,000 from North to South. It never freezes, and forms the highway of very important *commerce*, at all seasons; but it has variable and dangerous *currents*, and is liable to violent *storms*.

O. 135. How is the sea divided? 136. Describe the Northern or Arctic Ocean. 137. The Southern. 138. How are these oceans near the poles? Where do we find floating ice? Where fields of ice? 139. What is the value of these oceans for commerce? What useful articles do they furnish? 140. Describe the Indian Ocean.

141. *The Pacific Ocean extends* from Beering's Straits, about 8,000 miles, to the limits of the Southern Ocean; and from America to Asia, about 11,000 miles, or nearly half round the globe. It *contains* numerous clusters of islands, lying chiefly between the tropics.

142. *The Atlantic Ocean* is from 3,000 to 4,000 miles in breadth, between America and Europe, and 9,000 in length, from the Northern to the Southern Ocean. Between Norway and Greenland, the breadth is not more than 700 miles; between the capes of Africa and South America, it is about 1,500.

143. *The waters of the Atlantic and Pacific Oceans* do not freeze, except on the coasts in very cold climates or seasons, and in those branches which are enclosed by the land, and rendered fresh by the rivers which empty into them. They are therefore *navigable* at all seasons; and are covered with the ships of all nations, laden with the productions of every part of the earth.



(50) *An Iceberg.*

144. But *they are frequently obstructed*, during the spring and summer, by the fields and islands of ice which break off from the icy continents around the poles, and which sometimes float as far as latitude 40°. The appearance of these masses of ice in the glitter of the sunbeams is often grand and beautiful; but they are dangerous to ships, and chill the air for a great distance around.

The floating fields of ice are sometimes so extensive that their limits cannot be seen from the mast of a ship. Some of the islands, or *icebergs*, are 600 feet in height; and hundreds are frequently seen at once, surrounding a vessel in every direction. The engraving 50 shows one of their various forms. The ice even of salt water is almost fresh.

145. *Each of these oceans has various branches*, extending into the land, and opening other courses for its commerce.

141. The Pacific. 142. The Atlantic. 143. What can you say of the waters of the Atlantic and Pacific Oceans? Are they always navigable? 144. What obstructions are sometimes found in them? What is said of the islands of ice? 145. What kind of branches has each of these oceans? (Ex.)

It will be useful to examine each separately on the maps, with its various branches and smaller divisions.

EXERCISES ON THE MAPS.

It will be seen, on examining the maps of the Atlantic Ocean, Europe, and Africa, that the Atlantic Ocean extends into the Eastern Continent, forming the Gulf of Guinea, the Bay of Biscay, and the Mediterranean, Irish, North, and Baltic Seas. These seas are connected with the ocean by straits and channels; and each spreads into other smaller branches, forming gulfs, bays, and harbors. The following exercises will show their connections, and may be extended still farther by the teacher.

Physical Map of Europe. — What branches or parts of the Atlantic Ocean lie between the main land of Europe and the British Isles? What straits connect the North Sea and the British Channel? What branch or sea extends from the North Sea, farther into the continent? What straits connect the North Sea with the Baltic? What bay South of the British Channel? What sea lies S. of Europe? What straits lead into it? What branches has the Baltic Sea? The North Sea? The Irish Sea? What are the branches of the Mediterranean on the northern coast? What large one on the southern coast? (*The eastern part of the Mediterranean is often called The Levant.*)

Physical Map of N. America. — Describe the principal branches of the Atlantic in the northern part of N. America. What are the two branches between N. and S. America? What are the passages leading to each? Mention the branches of Baffin's Bay. Of Hudson's Bay. Of the Gulf of Mexico. Of the Caribbean Sea. What straits connect the Arctic Ocean with the Pacific? What branches of the Pacific are there on the western coast of N. America?

Physical Map of U. States. — What are the principal branches of the Atlantic, on the eastern coast of the United States?

Physical Map of Asia. — What great branches of the Pacific on the eastern coast of Asia? What gulfs in the Chinese Sea? What passages connect the Pacific and Indian Oceans? What are the two great branches of the Indian Ocean, extending into Asia? What branches has the Sea of Arabia?

(II.)* COASTS OF THE OCEANS.

146. *The usefulness of an ocean in commerce depends*, not merely on the freedom of navigation, but on the nature of its coasts, and the number of branches which extend into the land, and give passage, and safe anchorage, for ships.

147. *On low, sandy coasts*, like those of the Southern United States, the low tide leaves a broad beach, entirely dry, twice a day; and thus renders it more unsafe for a ship to come near it. Such coasts are usually straight

C. O. 146. On what does the usefulness of an ocean in commerce depend? 147. What is the case on low, sandy coasts?

* For the second course

also, with few indentations or harbors to receive ships; and on both accounts, they are not favorable to commerce.

148. *Bold or high coasts*, like those of the Northern United States, generally have deep water, and ships may safely come near them. They are usually crooked, or indented with numerous bays and harbors; and on both accounts, are more favorable to commerce.

149. *The North Atlantic Ocean* has a greater extent of high coast, and a larger number of branches, than most other parts of the sea. Hence the most extensive commerce in the world is carried on in this part of the sea, and on the coasts of Europe and North America which border on it.

150. The coasts of South America and Africa, *on the South Atlantic Ocean*, have few bays or harbors, and a considerable part of them are low. Hence we find that these regions have less commerce than any other part of the world.

151. *The western or Asiatic coast of the Pacific Ocean* is very much indented with bays, and harbors, and channels; and hence the nations living upon it have been, for ages, actively engaged in commerce on the ocean.

152. *The eastern or North American coast of the Pacific* has few bays or harbors, and is still inhabited chiefly by Indians, without commerce or seaships.

153. *The coasts of the Northern and Southern Oceans* are so constantly covered with ice, that their bays and harbors are of little use for commerce, except for a few weeks in the year.

THE LAND.

154. *The form of the land* is very irregular. *The continents appear* as if shattered by some great earthquake, and the islands like fragments scattered around them.

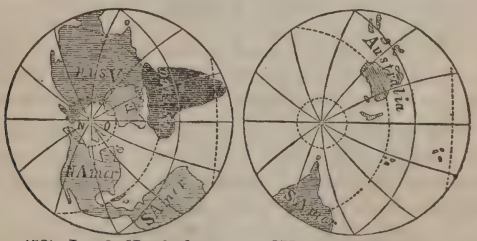
155. *The land* is also unequally *distributed* among the different parts of the world, as in the following maps of the Northern and Southern Hemispheres, represented as they would appear from points above the poles.

What effect does this produce on them as regards commerce? Where are such coasts found? 148. What is said of bold and high coasts? Are they favorable to commerce? Why are they so? Where are some such coasts? 149. What is said of the coasts of the North Atlantic Ocean? What effect does this have on the countries lying on it? 150. What can you say of the coast on the South Atlantic Ocean? How are the countries there with regard to commerce? 151. What is said of the western or Asiatic coast of the Pacific, and its commerce? 152. Of the eastern or North American coast of the Pacific Ocean? 153. Of the coasts of the Northern and Southern Oceans? L. 154. What is the form of the land? How do the continents appear? 155. How is the land distributed?

(51) *Northern Hemisphere.* *Southern Hemisphere.*

156. Here we see that the *greater part of the land* is in the Northern Hemisphere, of which it covers one half. But in the Southern Hemisphere, we find only the narrow extremities of the continents, and the greater part appears to be covered with water.

157. If we suppose ourselves looking down upon the earth from a point over London, and draw a map of the hemisphere around it, we shall find that it includes nearly all the land upon the globe; while the opposite hemisphere is almost covered with water, as represented in the maps numbered 52. Hence these have been called *the land* and *water hemispheres.*



(52) *Land Hemisphere.* *Water Hemisphere.*

THE CONTINENTS.

158. *The continents*, as we have seen, *differ from each other* in their form and direction. The Western Continent

156. Where is the greater part of the land, and how great? What is said in this respect of the Southern Hemisphere? 157. What point is the centre of the land hemisphere? What of the opposite hemisphere? C. 158. How do the continents differ from each other?

is narrow, and is longest from North to South. The Eastern Continent is broad, and is longest from East to West.

159. *The continents resemble each other*, in being divided by large seas in the centre. Both are also divided by smaller seas, gulfs, and bays, into numerous peninsulas

160. *Both continents terminate* in bold and lofty promontories; — the Western Continent in Cape Horn on the South, and the Eastern in the Cape of Good Hope on the South, and the North Cape on the North.

161. It is also remarkable, that all *the principal peninsulas* of both continents extend towards the South; and *both terminate* in narrow points, in the Southern Ocean.

162. *The Eastern Continent* was first known in history, and contains most of the inhabitants of the earth.

163. It is the largest body of land upon the globe, *containing* $32\frac{1}{2}$ millions of square miles. Its greatest length is 10,000 miles, and its greatest breadth 8,000.

164. *The Western Continent* was formerly inhabited entirely by Indians. In 1492, it was discovered by Christopher Columbus, and made known to Europeans, whose descendants now possess the greater part of it.

165. The Western Continent is not half so *large* as the Eastern, and contains only 14 millions of square miles. Its greatest length is 8,000 miles, and its greatest breadth is 4,000 miles. But at the Isthmus of Panama, it is only 30 miles broad; and at Cape Horn, it is narrowed down to a point.

EXERCISES ON THE MAPS.

Do the continents appear alike in shape, as you see them on the Map of the World? Which is the narrowest and longest? Is the Eastern Continent narrow? What branches of the Atlantic Ocean run into the continents? What peninsulas can you see on the Map of the World, extending to the South? What on the Map of N. America? What on the Map of Europe? What peninsulas on the Map of Europe extend towards the North? What in N. America? [*Denmark in Europe, and Yucatan in N America, are the only important peninsulas extending towards the North.*]

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159. How do the continents resemble each other? 160. How do both terminate? 161. What is remarkable in the peninsulas? 162. Which continent was first known in history? 163. What is its size? 164. Which continent was discovered by Columbus? By whom was it formerly inhabited? 165. How large is it?

GRAND DIVISIONS OF THE LAND.

166. The seas which penetrate the continents form *natural divisions in each. America is divided*, by the Gulf of Mexico and the Caribbean Sea, into two parts — North and South America — which are united by the Isthmus of Panama or Darien. North America forms the main body of the continent; and South America is a peninsula projecting towards the South.

167. *The Mediterranean Sea divides* the western part of the Eastern Continent into two parts — Europe on the North, and Africa on the South. East of these is Asia, which forms the great undivided body of the continent.

168. Both *Europe and Africa* are almost surrounded by water, and may properly be considered as peninsulas of Asia. Africa is connected with Asia by the narrow Isthmus of Suez; but Europe has a broad band of union extending from the Arctic Ocean to the Caspian Sea.

169. These natural divisions of the continents, Europe, Asia, Africa, North and South America, were formerly called quarters of the globe, but are now called *grand divisions.*

EXERCISES ON THE MAP OF THE WORLD.

A country or division of the world is said to be bounded by that sea, river, mountain, or division which lies next to it. It is best to repeat the boundaries always in the same order, North, East, South, and West — on the N. going from W. to E.; on the E. going from N. to S.; on the S. going from E. to W.; and on the W. going from S. to N.

Thus Europe is bounded on the North by the Arctic Ocean; on the East by the Ural Mountains and Ural River, which separate it from Asia; on the South by the Mediterranean and its branches; and on the West by the Atlantic Ocean.

Look on the map and describe the boundaries of Europe. How is Africa bounded on the N., E., S., and W.? How is Asia bounded? South America? North America?

What is the most southern cape of America? What of Africa? What narrow peninsula of Asia extends farthest South? What is the most northern point you can find of the Western Continent? What of the Eastern?

G. D. L. 166. What are the natural divisions of the Western Continent? 167. What are those of the Eastern Continent? 168. How may Europe and Africa be considered as regards Asia? 169. What are all these divisions of the continents called? (Ex.)

Which extends farthest North? What is the most eastern cape of South America? What is the most western of Africa? What is the most western cape of North America? The most eastern of Asia?

What part of America approaches nearest to Africa? What to Asia? What is nearest to Europe?

170. The numerous islands of the Pacific Ocean are considered, by late geographers, as forming the sixth grand division of the world, which is called *Oceanica*. It comprises the Indian Archipelago or Malaysia, Australia, and Polynesia.

171. Considerable tracts of land have also been discovered around the poles, which are not connected with either continent, and are called *the Polar Regions*. The northern are *the Arctic Regions*, and the southern, *the Antarctic Regions*.

EXERCISES ON THE MAPS.

Map of the Pacific Ocean. — What large group of islands lies next southeast of Asia? Which way from these are N. Holland and Australia? In what direction is Polynesia? What grand division do these islands form? Name some of the principal groups of islands in Polynesia. Which lie nearly West of Mexico? What islands are nearly West of South America?

Map of the World. — What are the largest portions of land in the Arctic Regions, around the North Pole? Which lie North of Europe? Which North of N. America? What lands do you find in the Antarctic Regions?

GENERAL EXERCISES ON THE MAP OF THE WORLD.

What grand divisions of the world does the equator cross? Which three grand divisions lie wholly N. of the equator? Which one lies chiefly S. of it? What part of Africa is S. of the equator? What large islands are wholly S. of the equator?

What countries does the Arctic Circle cross? The Antarctic Circle? The Tropic of Cancer? The Tropic of Capricorn? How many zones are there, and how situated? (p. 33.) Which two divisions of the world lie chiefly in the Torrid Zone? Which two extend a little way into the Southern Temperate Zone? Which two are chiefly in the Northern Temperate Zone? Which one extends from the Torrid, across the Temperate, into the Northern Frigid Zone? What two others extend into the Northern Frigid Zone? In what zone is the greater part of Greenland? The islands of Nova Zembla and Spitzbergen? In what zone is Iceland? In what zone are Beering's Straits? Is there any land known in the Southern Frigid Zone? Which oceans extend through all the zones but the Frigid?

170. What other grand division of the world, and what does it embrace? 171 What other regions can you mention as smaller divisions? (Ex.)

Which are chiefly confined to the Frigid Zones? In which zone do we find the greatest extent of land? In which the least? In which the greatest extent of water? The least? In which do we find most islands? What great island lies half in the Torrid, and half in the S. Temperate Zone?

CHARACTERISTICS OF THE GRAND DIVISIONS.

172. *The grand divisions of the Earth differ* from each other in situation, and, of course, in climate, and produce different kinds of plants and fruits. North America and Europe lie chiefly in the Temperate Zone; South America and Africa, chiefly in the Torrid Zone; and Asia alone extends through all the Northern Zones.

173. The grand divisions are very different in *size.* Asia is the largest division of the continents, and Europe is the smallest. Africa is next to Asia in extent. North America and South America are each smaller than Africa, but each is about twice as large as Europe.

174. The grand divisions differ remarkably in *their outlines;* some having a smooth, unbroken coast, and others being indented with numerous bays and harbors.

175. Thus it will be seen *on the maps*, that *Africa* and *South America* have a coast almost straight, with few bays or harbors. If we measure the line of land which touches the sea, we shall find that these divisions have less *sea-coast* in proportion to their size, and therefore less opportunity for commerce on the ocean, than any other parts of the world.

176. *Asia* has a much greater *proportion of sea-coast* than Africa and South America: *North America* has twice as much as either; but *Europe* has four times as much, and more countries are open to commerce, in Europe, than in any other of the grand divisions.

177. These divisions differ still more in *population*, or the number of people who inhabit them. *Asia* probably con-

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C. G. D. 172. How do the grand divisions of the Earth differ from each other? 173. Which is the largest of the grand divisions? Which the smallest? Which is of a middle size? How large is N. America compared with Europe? If you add N. and S. America together, which grand division is nearest to them in size? Are they equal to Africa and Europe together? 174. Are the grand divisions alike in their outlines? 175. What can you say of the coasts of Africa and South America? 176. What of the coast of Asia? What proportion of sea-coast has N. America? Europe? 177. Do the grand divisions differ in population?

tains one half the inhabitants of the globe, and *Europe* one quarter; *Africa* contains more than any other grand division except Asia and Europe; and *N.* and *S. America* contain less than any, except *Oceanica*, which is the least populous.

178. The grand divisions differ not less in *the number of inhabitants to a square mile.* Some divisions have many on a square mile, and are crowded with people, like Europe; and these are said to be *populous*, or *thickly inhabited.* Others have few on a square mile, and are said to be *thinly peopled*, like America.

179. *Asia* is populous, and *Europe* very populous; but *Africa* is not populous; and *N. and S. America* are thinly inhabited.

POLITICAL DIVISIONS.

180. The Creator *has formed* the natural *divisions of the Earth*, which seldom change. But he has given it to men for their residence, to be named and divided as they find it best. The divisions made by man are called *artificial* or *political divisions*, and are often changed.

181. *The first families*, when they became numerous by the increase of children and grandchildren, *formed* a tribe. *They resided* in tents, or dwellings, near each other, forming a village, or town, or city, and occupied the land around them; like Jacob and his twelve sons, whose history we find in the Bible.

182. When the tribes and villages increased, they formed *a nation*, and occupied a large country, like the Israelites.

183. When men are thus collected together, they find it necessary to have *a government*, which shall make laws,

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How many of the inhabitants of the world does Asia contain? Europe? How large a part in both together? Which of the remainder contains the greatest number of inhabitants? Which the least? 178. Have all the grand divisions the same number of inhabitants on a square mile? What is a populous country? What is it to be thinly inhabited? 179. Which grand divisions are populous? What can you say of Africa? What of N. and S. America? How many more inhabitants has Europe to a square mile than Asia? How many more than North America on a square mile? (*Some parts of the United States have as many inhabitants on a square mile as Europe.*) **P. D.** 180. What divisions of the Earth has the Creator formed? What can you say of the divisions formed by man? 181. How was a tribe first formed? Where did they reside? What example can you mention? 182. What took place when the tribes and villages increased? 183. What, then, became necessary? What is the object of government?

and punish those who disobey them. Hence we find the world divided into separate parts, called *states* or *countries*, each of which is under one government.

States are separated on maps by lines called *boundaries*, which are usually marked by dots.

184. *States receive various titles*, according to their government. A principality is a state governed by a prince; a duchy by a duke; a kingdom by a king; an empire by an emperor; and a republic by representatives of the people.

(III.) STATES AND GOVERNMENTS.

(53) *Absolute Monarchy.*

185. *The first kind of government* in the world was the patriarchal, when every father, or patriarch, governed his own family. Thus the people of Lapland, Greenland, New Holland, and some other savage nations, still appear to have no other government.

186. When a family increased to a tribe, the patriarch became *a chief*. The Arabs and North American Indians are governed by chiefs, who are sometimes *chosen* by the tribe.

In North America the chiefs were called sachems; in South America, caziques; and in Asia they are still called sheiks or emirs.

187. When a tribe became large and powerful, the chief often conquered other tribes, and governed large countries; and then he was

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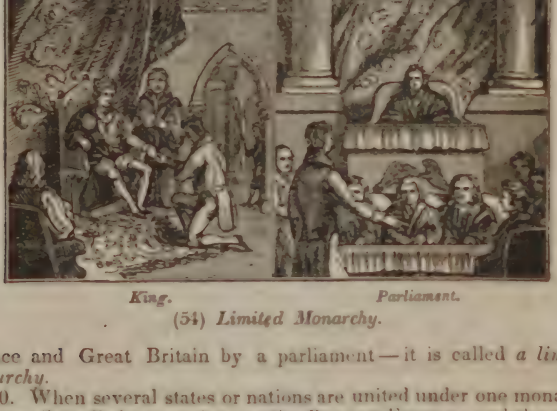
How is the world divided on this account? How are states separated and marked on maps? 184. Mention some of the titles given to states. **S. G.** 185. Describe the first kind of government in the world. What examples are there of this at the present day? 186. What is a chief in a tribe. Give some examples. 187. What took place when a tribe became large and powerful?

called, in Europe, *a duke*, *prince*, or *king*; and in Asia, *a khan*, *imam*, *rajah*, *sultan*, or *shah*.

188. When a country is governed by one man, the government is called *a monarchy;* and all the governors we have described are called *monarchs*. But *the country is called* a principality, duchy, khanate, kingdom, or empire, according to the title of the monarch.

189. When a monarch governs according to his own will alone, the government is called *an absolute monarchy;* as in Russia. When he is obliged to govern according to laws made by others — as in



King. *Parliament.*

(54) *Limited Monarchy.*

France and Great Britain by a parliament — it is called *a limited monarchy*.

190. When several states or nations are united under one monarch, it is usually called *an empire;* as the Russian Empire; and the monarch is generally called *an emperor*, or in Russia, *the czar*.

191. A *democracy* is a government in which the people meet together to make laws, as in some of the small cantons or states of Switzerland.

192. When the people are too numerous to meet together, many unite, and choose one man to speak and make laws for them, who is called *a representative*.

193. *The representatives meet* in an assembly, or legislature, to make laws; and a governor and judges are chosen, to judge and execute the laws. This government is called *a republic;* and the states of the United States are republics.

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188. What is a monarchy? What is the country called? 189. What is an absolute monarchy? Give an example. What is a limited monarchy? Mention some examples. 190. What is an empire? What is the monarch called? Mention an example. 191. What is a democracy? Give an example. 192. What is a representative? 193. What do representatives do? Who judge and execute the laws? What is this government called? Give examples.

194. When several states unite, and send representatives to form one government over the whole, it is called *a confederation*, like that of Germany, or *a federal republic*, like the United States, or Switzerland.

President. *Congress.*

(55) *Republican Government.*

195. In the United States, the representatives meet at Washington, in *a congress*, which consists of the Senate and the House of Representatives. The highest officer of the United States is called *the president.*

DIVISIONS OF STATES.

196. In order to govern a state more easily, it is *divided into smaller parts*, called provinces, districts, or counties, each of which has its own judge or governor. *These parts are subdivided* into towns, or cities, or parishes — each with its own government also.

197. When some of the inhabitants of one country emigrate to another, and form a settlement under the same government, this settlement is called *a colony;* as Canada is a colony of Great Britain.

EMIGRATE is from the Latin words *e*, out of, and *migro*, to remove. IMMIGRATE is from *in*, into, and *migro*, to remove. Hence those who move into a country are often called *immigrants;* and those who leave it, to go to some other, are called *emigrants.*

Thus our forefathers emigrated from Great Britain to America, and

194. What is a confederation? A federal republic? Give examples. 195. What is the American Congress? And of what does it consist? What is the highest officer in the United States called? **D. S.** 196. How is a state divided? How are provinces, districts, or counties subdivided? 197. What is a colony?

formed the *colonies* of Massachusetts, Virginia, Georgia, &c., which are now independent states, but were then under the government of Great Britain; and now many immigrate to our country from various parts of Europe.

FORMS AND SUBDIVISIONS OF THE LAND.

198. *Each grand division* of the world has its peculiar form and outlines, and is naturally divided into a main body, and members or peninsulas. Each is also divided, as already mentioned, by political boundaries, into smaller portions, called *countries* or *states*.

NORTH AMERICA.

199. NORTH AMERICA is the land of our birth, and one of the most favored portions of the world, in its natural character and productions. But it is only the third grand division in point of size, and is thinly inhabited.

EXERCISES ON THE MAPS.

Physical Map of N. America. — Between what oceans on the E. and W. does N. America lie? What ocean bounds it on the N.? What bay and straits lie on the N-E.? What is a bay? (*See* ¶ 99, (*b*)) What are straits? (¶ 103, (*b*)) What sound connects the Northern Ocean with Baffin's Bay? What is a sound? (¶ 105.) What straits are there on the N-W. of N. America? What gulf lies S. of N. America? Mention the boundaries of N. America in order, on the N., N-E., E., S-W., and N-W. What peninsula and isthmus connect N. and S. America? What is a peninsula? (*See* ¶ 101, (*a*)) What is an isthmus? (¶ 103, (*a*))

What bay runs into the continent on the N-E.? What straits lead to it? What branches has Hudson's Bay? What gulf between the Island of Newfoundland, on the N-E. coast, and the main land? What straits lead to it from the N.? What bays are next S-W. from the Gulf of St. Lawrence? What other bays and sounds do you find on the eastern coast of N. America? What bays in the Gulf of Mexico? What bay and gulf are on each side of the Isthmus of Panama? What long, narrow gulf on the south-western coast of N. America? What bays and sounds on the north western coast?

What peninsulas do you find on the N-E. coast of N. America? What bays form peninsulas on the eastern coast? What peninsulas do you find in the Gulf of Mexico? What peninsulas are there on the coast of the Pacific Ocean?

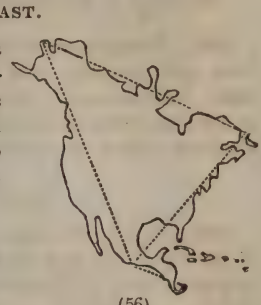
F. S. L. 198. How is each grand division of the world subdivided? What are countries? 199. What can you say of N. America? (Ex.)

What is a capé? (*See* ¶ 99, (*a*)) What is the most eastern cape of the continent of N. America? What is the most western? What is the most southern of Florida? What are the principal capes on the Northern Ocean, lying on Beering's Straits? What on the Atlantic? What on the Pacific Ocean?

FORM AND COAST.

200. *The main body of North America may be enclosed in a triangle.* But many branches of the sea indent this body of land, and many members project from it, so that *the peninsulas form* nearly $\frac{1}{10}$ of the whole surface.

This triangle is formed by a line drawn from C. Charles to C. Prince of Wales, and two other lines from those capes to Mexico.



(56)

201. Hence North America has a greater *proportion of sea-coast*, for its extent, than any other part of the world, except Europe. Even *its northern regions* are open to commerce, by the great inland sea of Hudson's Bay, and numerous branches of the oceans; and *its great rivers* furnish a passage from the sea to the interior.

202. *N. America is also surrounded* on the N. and S. by numerous islands, which increase its advantages for commerce.

EXERCISES ON THE MAPS.

Physical Map of N. America. — What figure will enclose the greatest part of N. America? What peninsulas East of this figure? What two W. of it? Is any part of the western coast W. of it? Is there any land N. of it? Is the peninsula of Labrador within this triangle?

What islands lie N. of N. America? What chain connects it with Asia on the W.? Where is Greenland? What islands are there at the mouth of the R. St. Lawrence? What is the largest island on the coast of the United States? What islands lie between N. and S. America? Which is the largest? Which three next in size? What name is given to the most northern group of islands? Mention some of the small islands called the Caribbean, lying E. of Porto Rico. Which is the most southern, and

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F. C. 200. What form will enclose the greater part of N. America? What proportion of its surface do the peninsulas form? 201. What proportion of sea-coast has N. America? What can you say of its northern regions? What of its rivers? 202. What of its islands? (Ex.)

largest of these? What islands on the coast of S. America, W. of Tobago? What are the principal islands on the western coast of N America?

NATURAL DIVISIONS.

203. *North America is united to South America by* the Mexican peninsula, which terminates on the South in the Isthmus of Panama, only 30 miles in width.

204. *The main body of the continent is divided*, by the chain of great lakes and the St. Lawrence River, into the middle and northern regions. The middle regions lie between the lakes and the Gulf of Mexico. The northern declivity lies North of the lakes, and pours its streams into Hudson's Bay and the Northern Ocean.

EXERCISES ON THE MAPS.

Physical Map of N. America.—What unites N. and S. America? What waters bound the Mexican peninsula on the East? What on the West? Between what gulfs does the Isthmus of Panama lie?

What chain of mountains is there in the western part of N. America? Which way do the Chippewan or Rocky Mountains run? What rivers flow down the western declivity of the Chippewan Mountains? What chain of mountains is there near the Atlantic Ocean? What is the course of the Apalachian Mountains?

What are some of the largest rivers on the Atlantic declivity? What great river and basin lie between the Chippewan and Apalachian Mountains? Where does the Mississippi empty? What rivers empty into the Gulf of Mexico W. of the Mississippi?

What rivers do you find running into the Northern Ocean? What are the principal rivers running into Hudson's Bay? Do any of these rivers rise S. of 50° N. latitude? What chain of lakes and rivers do you find below this latitude, running eastward into the Atlantic Ocean? Which way is the declivity N. of these lakes? (*See* ¶ 204.) How may the main body of N. America be divided? (*See* ¶ 204.)

POLITICAL DIVISIONS.

205. *North America was formerly inhabited* only by Indians. *The Spaniards discovered and conquered* the

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N. D. 203. What unites N. and S. America? What isthmus is there, and what is its width? 204. How is the main body of the continent divided? Where do the middle regions lie? Where does the northern declivity lie? Ex **P. D.** 205. By whom was N. America formerly inhabited? Who discovered the Mexican peninsula?

Mexican peninsula, and have since formed there the independent republics of Mexico, and Guatemala, or Central America.

206. *The British discovered or conquered* the middle and northern parts. They now possess all that is North of the great lakes; and this part of the continent is therefore called *British America*, including the provinces of Canada, New Brunswick, Nova Scotia, and Newfoundland.

207. *The British colonies in the middle regions* have become independent, and now form a part of the United States of America. The territory of the United States extends from the Gulf of Mexico to the great lakes, and from the Atlantic to the Pacific Ocean.

208. The new State of Texas, recently admitted into the American Union, also lies in the middle regions of North America.

209. *The northern and western parts of N. America* are occupied chiefly by independent tribes of Indians; and a large part of the inhabitants of Guatemala or Central America, and Mexico, are also of the Indian race.

210. *The Russians* have conquered many tribes of Indians on the North-West coast, and established a small colony there. The country claimed by them is called *Russian America.*

EXERCISES ON THE MAPS.

Political Map of N. America. — How is Guatemala or Central America bounded on the N. and E.? How is it bounded on the S-W.? On the N-W.? What is its capital? (*The capitals are marked on the maps by having the name printed in capital letters, as* ST. SALVADOR, MEXICO, WASHINGTON, and MONTREAL.) How is Mexico bounded on the N.? On the E.? On the S-E.? On the W.? What is its capital? How is Texas bounded? What is its capital?

What oceans bound the United States on the E. and W.? What gulf and states on the S.? What river, lakes, and territory, lie N. of the United

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What republics have been formed there? 206. Who discovered and conquered the middle and northern parts of N. America? What do the British now possess, and what is it called? 207. What former British colonies have become independent? What republic do they now form a part of? How far does the United States' territory extend? 208. What new State in the middle region of North America? 209. How are the northern and western parts of North America occupied? 210. What can you say of Russian America? (Ex.)

States? What is the capital of the United States? How is British America bounded? What is the capital of Canada?

(II.) Between what latitudes and longitudes does N. America lie? What parts of N. America are between 50° and 60° of N. latitude? Between 40° and 50°? Between 30° and 40°? What is nearly the latitude of Quebec? Of Montreal? Of Washington? Of New Orleans? Of Mexico? Of the West Indies? Find the longitude, from London, of Philadelphia, New Orleans, Mexico, New York, and Boston.

UNITED STATES OF AMERICA.

211. *The territory of the United States* occupies the greater part of the middle regions of North America, from the Atlantic to the Pacific Ocean. *It contains* two and a half millions of square miles, and is equal to more than two thirds of Europe in extent.

212. *This territory is naturally divided* into three portions by its mountains; (1) the western declivity, or Oregon Territory, West of the Chippewan Mountains; (2) the eastern declivity, East of the Apalachian Mountains, including the states on the Atlantic; and (3) the basin of the Mississippi River, lying between the mountains.

213. The United States thus have a *sea-coast* of about 2000 miles on the Atlantic Ocean and the Gulf of Mexico, and of 600 miles on the Pacific Ocean.

214. *But the interior of the United States is also penetrated to the centre* by great rivers and lakes, which open a communication with the ocean. Their shores form a line of *fresh-water-coast* of still greater length than the sea-coast; and give the United States advantages for commerce which are enjoyed by few countries in the world.

EXERCISES ON THE MAPS.

Physical Map of U. States. — What part of N. America is occupied by the territory of the United States? (¶ 211.) What mountains cross it on the West? What on the East? What river and basin lie between these mountains?

U. S. A. 211. What part of N. America is occupied by the territory of the United States? How many square miles does it contain? How large is it, compared with Europe? 212. How is this territory naturally divided? Mention each portion. 213. How much sea-coast has the United States, and where? How is this, compared with other parts of the world? 214. What communication has the interior with the ocean? What do the shores of the lakes and rivers form? What advantages does this give? (Ex.)

How is this territory bounded on the East? How on the West? What lakes and river bound it on the North? What line of latitude bounds it from the lakes to the Chippewan Mts.? (*Beyond the Chippewan Mts. the boundary is not finally settled.*) What gulf bounds it on the South? What river forms a part of the South-Western boundary? What line of latitude is a part of the Southern boundary, West of the Chippewan Mts.?

What bay is the most northern, on the Atlantic coast of the U. States? What capes has it? What bay runs North, into the land, next South of Massachusetts Bay? What sound do you find next West of Narragansett Bay? What two bays, next South of this, receive large rivers? What are the capes of Delaware Bay? Of Chesapeake Bay? What sounds next South of Chesapeake Bay? What bays on the coast of the Gulf of Mexico? What bays or inlets do you find on the coast of the Pacific Ocean?

What are the principal capes of the United States coast, beginning at the North, and going round to the mouth of the Mississippi? Mention the islands in the same way, and their situation.

What great river connects the centre of the United States with the Gulf of Mexico? What lakes and river, on the North, connect it with the Atlantic Ocean? What addition does this make to the line of land communicating with the ocean?

From what mountains do the rivers generally rise which flow into the Atlantic Ocean? What river empties into the Atlantic, at the West end of Long Island? What six principal rivers empty into the Atlantic, East of the Hudson River? What two large rivers are next South of the Hudson?

What is the general course of the rivers N-E. of the Susquehannah? What is the general course of the rivers which empty into the Atlantic, South of the Susquehannah? What rivers empty into the Chesapeake Bay, and on which side? What considerable branch has the Potomac? What rivers empty into Albemarle Sound? What empty into Pamlico Sound? What rivers are found between these and Savannah River? Describe their source, and branches. What rivers S. of the Savannah empty into the Atlantic? What is the principal river of Florida? Of Texas?

DIVISIONS OF THE UNITED STATES.

215. *The eastern part of the vast country possessed by the United States*, extending from the Atlantic Ocean several hundred miles West of the Mississippi River, is occupied by states settled and governed by white men. *The*

D. U. S. 215. How is the eastern part of the territory of the United States occupied?

western part is inhabited chiefly by Indians; but is subject to the general government of the United States.

216. *Thirteen of the states* were formerly colonies of Great Britain, and under the same government; but considering that government unjust to them, they declared themselves independent in 1776.

The original states were permanently settled or founded at the following periods: New Hampshire, 1623; Massachusetts, 1620; Rhode Island, 1635; Connecticut, 1635; New York, 1614; New Jersey, 1664; Pennsylvania, 1682; Delaware, 1627; Maryland, 1633; Virginia, 1607; N. Carolina, 1710; S. Carolina, 1669; Georgia, 1733.

217. They have since bought *new territories*, and formed *new states;* and there are now 29 states, united under one government.

218. As the colonies and states of the United States were formed peacefully, in one country, and by one government, we find them more frequently *bounded by straight lines*, than in any other part of the world; and we cannot describe them generally by *natural boundaries*.

219. *They are divided by their climate and productions* into two great portions; the temperate or grain states, whose chief products are grain and grass, and the warm or cotton states, whose chief products are rice and cotton.

220. *The grain states* lie North of the line of latitude of 36½ degrees. *The main body may be enclosed* in a parallelogram, with a projection to the East. (p. 35, and map 57.)

221. *The cotton states* lie South of the parallel of latitude of 36½; and *may chiefly be enclosed* in a parallelogram, with two projections towards the south.

222. *The territories West of the Mississippi* form a third parallelogram, between the parallels of 42° and 49°, leaving the Indian territory on the South.

The western part? 216. What were these states formerly? 217. What is the number of states now? 218. What is there singular about their boundaries? 219. How are the United States divided by their climate and productions? What are their chief products? 220. Where do the grain states lie? What figure will enclose them? 221. Where are the cotton states? What figure will enclose them? 222. What figure will enclose the remaining territory of the United States?

Temperate or Grain States.

223. *The grain states may be subdivided into three portions.* (1) *The Eastern or New England States* form a parallelogram East of the Hudson River. (2) *The middle or Central States* extend from the Hudson River and the Atlantic Ocean to the lakes, and the head waters of the Ohio River. (3) *The North-Western States* lie on the Ohio and Mississippi Rivers, and the lakes.

224. *Maryland and Virginia* are generally classed with the Southern or cotton States; but as they are chiefly grain states, they are here classed with others of the same kind.

225. It will be seen on the map, that with the exception of Vermont, the *Eastern and Middle States* lie on the Atlantic Ocean and its waters. *Several of the Middle States* extend across the Apalachian Mountains into the basin of the Mississippi River. The *North-Western States* lie entirely in the basins of the Mississippi and the St. Lawrence.

EXERCISES ON THE MAPS.

Political Map of U. States.— What six states lie E. of the Hudson River? What are they called? (*See* ¶ 223.) What six states and two territories lie on the Ohio, the Mississippi, and the lakes. North of latitude 36½°? What are they called? What six states, N. of latitude 36½°, are bordered on the East by the Eastern States, the Atlantic, and its waters, and on the West, by the North-Western States, and the Lakes? What are they called? Are Maryland and Virginia cotton states? (¶ 224.) Give the boundary of each state as follows:—

How is Maine bounded on the N., E., S., and W.? (1) (See note * containing a sketch of some of the more difficult boundaries, with blanks for the names, which the pupil should fill up from the map.)

How is New Hampshire bounded?* (2) Vermont? Massachusetts?

G. S. 223. How may the grain states be subdivided? Where do the Eastern States lie? What do they form? Where are the Middle or Central States? The North-Western? 224. What can you say of Maryland and Virginia? 225. Do all the Eastern and Middle States lie on the Atlantic? How far do some of the Middle States extend? In what basins do the North-Western States lie? (Ex.)

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* By the late treaty between the United States and Great Britain, Maine is bounded on the E. by the St. Croix River, and a line running from its head, North, to the St. Johns River; on the N. by the St. Johns River; and on the N-W. by a line from L. Pohenagamock to the highlands from which the St. Johns rises, and by those highlands.

(1) Maine is bounded N. by ——; E. by ——; S. by the —— Ocean; W. by ——; and N-W. by the highlands and a line from the —— to Lake ——. (2) New Hampshire is bounded N. by ——; E. by the state of —— and the —— Ocean; S. by ——; and W. by —— River, which separates it from ——

WESTERN TERRITORIES.
O.T.
Mo.T.
L.T.
W.T.
INDIAN TERRITORY
MEXICO.
TEXAS.
GRAIN
COTTON STATES
N.E. States.
Mo.
Ill.
In.
K
T.
Ar.
L.
M.
Al.
G.
S.C.
N.C.
V.
P.
F.
UNITED STATES.

How is Rhode Island bounded on the N. and E.? On the S. and W.? (3) What are the boundaries of Connecticut, on the N., E., S., and W.? New York? New Jersey? Pennsylvania? Delaware? (4) Maryland? (5) Virginia? (6)

What river separates Kentucky from the three states north of it? What river separates Missouri from the states E. of it?

How is Kentucky bounded on the N., E., S., and W.? Ohio? Indiana? Illinois? Missouri? Michigan? Wisconsin Territory? Iowa?

Warm or Cotton States.

226. *The warm states, which produce rice and cotton*, and in some parts even the sugar-cane, lie south of the parallel of latitude of 36½ degrees, as already described. (¶ 221)

227. *The cotton states may be divided* into the Southern States, lying on the Atlantic Ocean, and the South-Western States, lying on the Gulf of Mexico and the Mississippi River.

228. Beyond the boundaries of Arkansas and Missouri, and between the Red and the Platte Rivers, is *the Territory secured to the Indians* who have been removed from the states.

229. *The remainder of the Territory West of the Mississippi* forms the third parallelogram of the United States, divided into territories still occupied by the Indians.

EXERCISES ON THE MAPS.

What southern states lie on the Atlantic Ocean? What states lie on the Gulf of Mexico? What others North of them, on the Mississippi River?

How is N. Carolina bounded? What line of latitude on the N. separates it from Virginia? How is Tennessee bounded? Arkansas? S. Carolina? What river separates it from Georgia? How is Georgia bounded? Alabama? (¶ 227.) Louisiana? Florida? Texas? Which of these states may be called Southern States? Which South-Western States?

C. S. 226. Where do the cotton states lie? 227. How may they be divided? 228. Where is the territory secured to the Indians that have removed from the United States? 229. What figure will enclose the remaining territories? By whom are they occupied? (Ex.)

(3) Rhode Island is bounded N and E. by ——; S. by —— Ocean; and W. by ——. (4) Delaware is bounded N. by ——; E. by —— River and Bay, which separate it from ——; S. and W. by ——. (5) Maryland is bounded N. by ——; E. by the state of —— and —— Ocean; S-W. by —— River, which separates it from ——. (6) Virginia is bounded on the N. by —— and ——; on the E. by the —— Bay and Ocean; on the N-E. by —— River, which separates it from ——; on the S. by the line of 36½° N. latitude, which separates it from ——; on the W. by ——; and on the N-W. by the River ——, which separates it from the state of ——.

Political Map of U. States. — Where is the territory secured to the Indians who have left the settled States? (¶ 228.) How is that territory bounded? What figure will enclose the remaining territory of the United States? (¶ 229.) Between what parallels of latitude does this region lie? What are its eastern and western boundaries? Into what territories is it divided? How are they bounded?

GOVERNMENT OF THE UNITED STATES.

230. *The United States form* a federal republic. (¶194.) *It consists of* a number of distinct states, united under one general government, whose seat or capital is at Washington.

(II.) 231. In every government there are three distinct powers. (1.) The power of making laws, or *the legislative*, which sometimes belongs to one man, and sometimes to a number of men called *a legislature*. (2.) That of administering justice, or *the judicial power*, usually in the hands of *judges*. (3.) The power of executing the laws, or *the executive*, which generally belongs to *the chief*, *king*, *duke*, *president*, or other supreme head of the government.

The ruler of a country is usually assisted in his duties by a number of persons chosen by himself, called *ministers*, *councillors*, or *secretaries*. As he also consults with them on affairs of importance, they are called his *cabinet*, or *council*. The prime minister in Turkey and Persia is called *the vizier*, and the cabinet is called *the divan*.

232. *The general government of the United States* has the power of settling all disputes between the states, and governing all the territories; of making war and peace with foreign countries; and of raising taxes, and collecting duties on imported goods in each state, to pay the expenses of the government.

A TAX is money paid to a government. DUTIES are taxes paid on imported goods, to support government.

233. *The laws are made* by the Congress, which consists of a House of Representatives, chosen every two years by the people of each state, according to its population; and of a Senate, of two members from each state, chosen for six years.

234. *The laws are executed* by the President, who is chosen every four years by electors appointed by the respective states. He is *assisted by* the Secretaries of State, of the Treasury, of War, and of the Navy, the Attorney-General, and the Postmaster-General; all of whom united form the Cabinet. The President, with the approbation of the Senate, appoints the inferior officers of government, and those of the army and navy.

G. U. S. 230. What do the United States form? Of what does it consist? [231. What powers has every government? What is the legislative power? The judicial? The executive? How is the ruler of a country assisted? 232. What power has the government of the United States? 233. Who make the laws of the United States? 234. By whom are the laws executed? Who assist the president? What officers does the president of the United States appoint?

235. *The Judges of the United States* are appointed by the President and Senate, for life; and cannot be removed except by a public impeachment and trial for ill conduct. Their duty is to decide causes under the constitution and laws of the United States.

236. *The President of the United States and his secretaries reside* at Washington, in the District of Columbia, which belongs to the general government, and Congress assemble there every year to make laws. Hence Washington is called *the seat of government* or *capital.*

237. *The individual states of the American Union* are republics, governed by assemblies, and a governor, all chosen by the people for a limited time.

There are usually two houses of representatives, which are united with the governor in making laws. The executive power is vested in the governor and his subordinate officers; and the judicial power in judges, appointed in different ways, but usually for life.

238. *Each State* has also its own capital or seat of government, and *is divided* into counties and towns, each with its government and judges, subject to the state government.

A town which is governed by a mayor and aldermen is called a city, though it may be small.

EXERCISES ON THE MAPS.

Map of the Eastern States. — What smaller divisions do you find in each state? What is the capital of Maine? (*The names of the capitals are in capital* LETTERS, WITH A DASH *under them.*) Is it on the ocean, or in the interior? In what part of the state is it — in the eastern, western, northern, southern, or central part? What is the capital of New Hampshire? Where, and in what part of the state is it? Mention in the same way the capital of Vermont. Of Massachusetts. (*Rhode Island and Connecticut have two capitals each.*) What are the two capitals of Rhode Island? Of Connecticut?

Map of N. Division of U. States. — What is the capital or seat of government of New York, and where? Where is New York, its chief city? What is the capital of Pennsylvania? Where is its chief city, Philadelphia? What is the capital of Maryland? Where is Baltimore, its chief city? Mention the capitals, and their situation, of each of the Middle States. Of the North-Western States. Where is Cincinnati, the chief city of Ohio? Where is St. Louis, the chief city of Missouri?

Map of S. Division of U. States. — What is the capital of N. Carolina, and in what part of the state is it? What is that of S. Carolina? Of

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235. Who appoint the judges of the United States? What is their duty? 236. Where does the president reside? Where is Washington? What is it called?] 237. What is the government of the individual states? 238. How is each state divided? (Ex.)

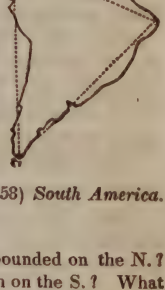
Georgia? Of Alabama? Where are Charleston, Savannah, and Mobile, the chief cities of these states? What is the capital of Mississippi? Of Louisiana? Of Tennessee? Of Arkansas? Of Florida?

SOUTH AMERICA.

239. South America is the smallest of the grand divisions except Europe and Oceanica, and is one of the most thinly inhabited.

240. *The greater part of South America may be enclosed* in a triangle, as in the map 58; and it forms a body of land, almost without members or peninsulas.

241. It has few *bays* or *harbors* on its coast, and less *sea-coast* and *commerce*, in proportion to its size, than any part of the world, except Africa. Its numerous and great *rivers* are little known or navigated.



(58) *South America.*

EXERCISES ON THE MAPS.

Physical Map of S. America. — How is S. America bounded on the N.? How on the N-E. and S-E.? What ocean does it reach on the S.? What bounds it on the W.? Repeat the boundaries of S. America in order, N., N-E., S-E., S., and W. What figure will embrace the greater part of S. America? Draw a triangle like that in the figure, and then draw the coast. Has it any large gulfs or bays? Has it any great peninsulas? Any long rivers?

What is the most northern cape of S. America? The most eastern? The most western? The most southern? (*The extreme point of the main land of S. America is Cape Forward; but Cape Horn, on Hermit Island, is the most southern point of land connected with it.*) What are the principal capes on the coast of the Atlantic Ocean? What on the Pacific Ocean?

What islands are there on the northern coast of S. America? What islands lie N. of the Orinoco River? What one at the mouth of the Amazon? What islands off the coast of Brazil? On what island is Cape Horn? What islands E. of it? (*The Falkland Islands are occupied by British colonists.*) What islands are there on the western coast?

S. A. 239. What can you say of S. America? 240. How may the greater part of S. America be enclosed? Has it any peninsulas? 241. What can you say of its coast and commerce? What of its rivers? (Ex.)

NATURAL AND POLITICAL DIVISIONS.

242. *South America is naturally divided*, by the mountain chain of the Andes, into two parts — the western declivity or slope, towards the Pacific Ocean, which is narrow and long, and the eastern declivity, which forms the greater part.

243. *It was formerly inhabited* only by Indians. But most of them were conquered by *Spaniards and Portuguese*, who subdued the most important countries of South America, and established colonies, all of which have become independent states.

244. *On the Andes, and their western declivity*, the Spaniards have formed the republics of Chili, Bolivia, Peru, Ecuador, and New Granada. *On the northern coast*, they have formed that of Venezuela; and *on the southern coast*, those of La Plata and Monte Video, or Uraguay.

245. *The Portuguese formed* the Empire of Brazil, which occupies the eastern and central regions.

246. *The Dutch, French, and English* formed distinct colonies, in a small country called Guiana, on the north-eastern coast, which are still governed by the mother countries.

247. *The Indians that are unconquered still occupy* the southern extremity, which is called Patagonia; Araucania, which borders on Chili; and a small country called Paraguay, on the Paraguay River. Indians are also the only inhabitants of *the interior of Brazil*, formerly called Amazonia.

EXERCISES ON THE MAPS.

Physical Map of S. America. — What great chain of mountains is there in S. America? How does it divide S. America? (¶ 242.) Are there any large rivers on the western declivity of the Andes? What great river on

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N. P. D. 242. How is S. America divided? What can you say of the western declivity? What of the eastern? 243. By whom was S. America formerly inhabited? Who subdued the most important countries of S. America? What can you say of the colonies established here? 244. What republics have the Spaniards formed on the Andes and the western declivity? What on the northern coast? On the southern? 245. What empire have the Portuguese formed, and where? 246. Where is Guiana, and how is it divided and governed? 247. What countries are possessed by the unconquered Indians? Who inhabit the interior? (Ex.)

the eastern declivity, in the middle of S. America? What are on the N.? What on the S.?

Political Map of S. America. — What country occupies the basin of the River Amazon? What countries are there in the basin of the La Plata River? What in the basin of the Orinoco River? What states lie on the Andes, and their western declivity?

How is Brazil bounded? What is its capital? How is La Plata bounded? Paraguay? Uraguay, or Monte Video? What is the capital of each of these states? How is Patagonia bounded? Has it any towns? How is Chili bounded? Bolivia? Peru? Ecuador? What is the capital of each? What are the boundaries of New Granada? Of Venezuela? What are their capitals? How is Guiana bounded? What are the chief towns of each division?

(**II.**) What are nearly the latitudes of the northern and middle countries of S. America? What places do you find in latitude 10° N.? What places under the equator? What places do you find 12° S. of the equator? What islands are in about 20° S. latitude? What islands in the Pacific are in the same latitude? What islands and countries are in 20° N. latitude? What places lie in 34° or 35° S. latitude? What is the latitude of Cape Horn? What other land can you find in the same latitude?

Moral and Political Chart of the World. — What countries of N. America have the same latitude with the southern countries of S. America?

Between what longitudes does S. America lie? What parts of N. America are in the same longitude with Brazil? What with Peru? What countries of S. America have noon at the same time with Philadelphia? What is the difference of time between Philadelphia and the eastern parts of Brazil? What is the difference of time between Peru and London?

EUROPE.

248. EUROPE is a peninsula projecting from the body of the eastern continent towards the west, between the Northern Ocean and the Mediterranean Sea. It is the smallest of the grand divisions, except Oceanica.

EXERCISES ON THE MAPS.

Physical Map of Europe. — How is Europe bounded on the N.? What mountains, river, and sea bound it on the E.? What mountains, and what great seas, on the S.? Mention all the seas and straits on the S., from the Black Sea to the Atlantic Ocean. What ocean bounds Europe on the W.? Repeat the boundaries of Europe in order, on the N., E., S., and W. On how many sides is it surrounded by water?

What is the most southern cape of Europe? What is the most western cape (*in Portugal?*)? What is the most northern cape? (*The most northern cape of Europe is the North Cape, on Mageroe Island; but the most northern point of the main land is Nord Kyn, a cape E. of this, in Lapland.*)

E. 248. What is Europe, and what is its size? (Ex.)

(59) *Europe.*

249. *Europe is indented and divided,* in every direction, by branches of the ocean.

Its main body may be enclosed in a triangle, as in figure 59, which embraces two thirds of its surface. *The parts not enclosed in this triangle* are chiefly peninsulas, which cover half as much surface as the main body, besides numerous islands, some of which are large.

This triangle is formed by a line drawn from the Bay of Biscay (BB) to the Caspian Sea, (CS) and two lines from the ends of this, uniting in the Gulf of Kara, (GK) at the north-eastern corner of Europe.

250. In this way, Europe has more *sea-coast*, in proportion to its extent, than any other division of the continents; and almost every country is open to commerce with the ocean.

F. C. 249. How is Europe indented and divided? What figure will enclose the greater part of Europe? How must it be drawn? How much of it will this contain? 250. What can you say of the sea-coast of Europe, and of its commerce? (Ex.)

EXERCISES ON THE MAPS.

Physical Map of Europe. — What seas are there in the N. of Europe? What branches has the Baltic Sea? What channels are there around the British Isles? What bay on the western coast of Europe? What branches has the Mediterranean Sea? Is Europe much divided by these seas? What figure will enclose the main body of Europe? (¶ 249.) What do you find outside of this triangle? Does the sea-coast of Europe appear to be extensive?

What mountains bound Europe on the E.? What on the S-E.? What mountains do you find in the centre of Europe? (*The Alps are the highest mountains of Europe.*) Do you find any mountains between the Carpathian and the Ural Mountains?

NATURAL AND POLITICAL DIVISIONS.

251. *The eastern portion of the triangle* described, forms an extensive tract, nearly level, which is occupied by the Russian Empire, extending from the Northern Ocean to the Black Sea.

252. *The centre of Europe* is covered with mountains and highlands, divided into a number of table lands, valleys, and basins. These are occupied by the numerous states of Germany, and the federal republic of Switzerland.

253. Several of the northern states of Germany are united in *the Kingdom of Prussia,* and several, on the south-east, in *the Empire of Austria.*

254. *On the western declivity of the highlands* which occupy the centre of Europe, we find the kingdoms of France, Belgium, and Holland.

255. On the South are *three peninsulas*, the Grecian, Italian, and Spanish. *The Grecian peninsula is occupied* by the Kingdom of Greece and the Empire of Turkey. *The Italian peninsula is divided* into the Italian States. *The Spanish peninsula is divided* into the kingdoms of Spain and Portugal.

The Ionian Isles, on the coast of Greece, form a republic with a British governor.

N. P. D. 251. What empire is there in the eastern portion of the triangle? What can you say of this tract of country? 252. What is said of Central Europe? What states and republic occupy it? 253. What kingdom and empire in the North and in the South-East? 254. What kingdoms are on the western or Atlantic declivity of the centre of Europe? 255. What three peninsulas are there in the S. of Europe, and how are they divided? What are the Ionian Isles?

256. *In the northern part of Europe* we find the low, sandy peninsula which forms the principal part of the Kingdom of Denmark, and the mountainous peninsula of Scandinavia, embracing the kingdoms of Sweden and Norway.

257. On the north-western coast of Europe are the islands which form *the kingdom of Great Britain and Ireland*, the land of our forefathers, and the residence of the only nation who speak the same language with ourselves.

This kingdom has *colonies and possessions* in all parts of the world, and hence it is often called *the British Empire.*

EXERCISES ON THE MAPS.

Physical Map of Europe. — What three peninsulas are there in the S. of Europe? Which of these is nearly square? Which resembles a boot in shape? Which is nearly triangular? How is the Grecian peninsula occupied? (¶ 255.) The Italian? The Spanish? What mountains do you find in the Spanish peninsula? What mountains in Italy? What in the Grecian peninsula? What two peninsulas are formed by the Baltic Sea? What states occupy them? (¶ 256.)

What large islands lie N. of France? What kingdom do they form? What are its three great divisions? What large island is there N-W. of the British Isles? What groups of small islands between Iceland and the British Isles? (*Iceland and the Faroe Isles belong to Denmark, and the Shetland Isles to Great Britain.*) What islands are there near Scotland on the N. and W.? What islands in the Irish Channel? What in the British Channel? What one in the North Sea? (*All these small islands belong to Great Britain.*)

What islands are there on the eastern coast of Spain? What islands W. and S-W. of Italy? (*Corsica belongs to France, and Malta to Great Britain.*) What islands on the western coast of Greece? What are the principal islands in the Ægean Sea, or Grecian Archipelago? Where is Candia?

In how many directions do the rivers flow from the central mountains of Europe? What great river flows to the E. into the Black Sea? What great river flows to the N-W. into the North Sea? What one into the Mediterranean? What rivers flow down the declivity of France, into the Atlantic Ocean? What rivers, beside the Danube, empty into the Black Sea? What great river passes from the centre of Russia into the Caspian Sea? What rivers empty into the Northern Ocean from Europe? What into the Baltic Sea? What into the North Sea? What rivers are there in Sweden and Norway? In Great Britain? In Spain? In Italy? In Turkey?

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256. What peninsula and kingdom in the northern part of Europe? 257. What islands and kingdom on the N-W. coast of Europe? What other name is given to this kingdom, and why? (Ex.)

What lakes are there in Russia? What in Sweden? What in Switzerland? (*The Lake of Constance is formed by the River Rhine, and the Lake of Geneva by the Rhone.*)

Political Map of Europe. — What are the five countries of Europe lying North of 55° latitude? What are the boundaries of each? What are the middle countries between 55° and 45°? What are the boundaries of each? What are the four South of 45°, and their boundaries? What are the capitals of the northern countries and Poland? Of the middle countries? Of the southern?

(**II.**) Between what latitudes and longitudes is Europe? What countries of Europe are in the latitude of Kamschatka, Labrador, and Hudson's Bay, or N. of 50° N. latitude? What in the latitude of Canada, 45° to 50° N.? What in the latitude of the Northern United States, or 40° to 45° N.? What are in the latitude of Maryland, Virginia, and the adjoining states, or 36° to 40° N.? Mention three capital cities, nearly in the latitude of the Shetland Isles and Greenland, or latitude 60°. What four others nearly in that of London, and Cape Charles, in Labrador, or about latitude 51½°? What capitals between 45° and 50° of N. latitude? What places in the latitude of Halifax, or 44° to 45°? Of Boston, about 42½°? What capitals nearly in the latitude of New York and Madrid, or 40° to 41°? What in that of Washington, or about 39°? Trace the line of 36° N. latitude (which is nearly that of Raleigh, North Carolina) to Asia, and mention the places and coasts on or near it.

Find the longitude of London — Petersburg — Paris — Rome — Constantinople. What is the difference of time between London and Philadelphia? Boston? New York? What between Petersburg and New Orleans? Vienna and Washington? Constantinople and Baltimore?

ASIA.

258. Asia is the largest of the grand divisions of the world. It appears to have been the cradle of the human race, and now contains more than half the population of the globe.

259. *Its form* has been compared to that of a broad curtain, hanging from the coast of the Arctic Ocean. It is so massive, that *the greater part of it may be included* in a figure of four sides; as in figure 60.

This figure is formed by two lines drawn from the Isthmus of Suez (S.) to the Gulf of Kara, (K.,) and from the Island of Hainan, (H.,) in the Pacific, to Cape Schelagskoi, (C. S.,) on the Arctic Ocean; and two others from W. to E., uniting their extremities.

260. *The peninsulas of Asia* form more than one third of its surface; and, from the extent of their coasts, have long been the chief seat of commerce. But *the greater*

A. 258. What can you say of Asia? 259. What of its form? How may the greater part of it be enclosed? 260. What is said of the peninsulas of Asia?

part of Asia cannot be reached by ships from the ocean; and even the coast on the North is so much obstructed by ice, that it has no navigation.

(60) *Asia*

261. Hence Asia has little useful *sea-coast* in proportion to its extent; and is far behind Europe and N. America in commerce.

262. *A range of table lands* passes through the middle of Asia, from East to West, which has declivities towards the seas around it.

EXERCISES ON THE MAPS.

Physical Map of Asia, on the North, East, South, and West. What figure will enclose the main body of Asia? Draw a figure like that here given, and the peninsulas around it.

How is Asia bounded on the N., E., and S.? What mountains, and river, and four seas, bound Asia on the W.? What gulf lies E. of Arabia? What sea lies S. of Arabia? What straits connect it with the Red Sea and the Persian Gulf? What bay E. of Hindoostan? Through what straits can you pass to the E. of Chin-India? What seas do you find there? What gulfs in the China Sea? What seas lie N. of this, on the eastern coast of Asia? What gulfs N. of Siberia?

What of the greater part of Asia and its northern coast? 261. What proportion of sea-coast has it? How does it compare with Europe and America in commerce? 262. What range of table lands has Asia? (Ex.)

What peninsulas are formed by these seas and gulfs, on the eastern coast? What on the S.? What on the W.? What are the most southern capes of Asia? What capes are there on the eastern coast, beginning at the S.? What on the northern coast?

How large a part of Asia consists of peninsulas? (¶ 260.) Has Asia much sea-coast in proportion to its size?

What mountains are there in the northern part of Asia? What in the southern? What table lands lie between them? In what directions do the rivers flow from these table lands? How many declivities must there be descending from these table lands?

What three great rivers flow from the central table land through Siberia? What three great rivers are there on the eastern declivity of the table land? What rivers flow from it, to the South, through Chin-India? What through Hindoostan? What rivers are there on the western declivity of the central table land?

What inland seas are there in the western part of Asia? What lakes? What large lake N. of the table land, and what river flows from it?

POLITICAL DIVISIONS.

263. *The central table land is usually called* Chinese Tartary; and China and Mandshuria lie on its eastern declivity. These countries form *the Chinese Empire.*

264. *The western table land is divided* into the kingdoms of Persia, Afghanistan, and Beloochistan. North of these, is *the western declivity of the central table land*, called Independent Tartary, occupied by several independent tribes and states.

265. *The northern declivity of Asia* is occupied by the vast plains of Siberia, with the peninsula of Kamschatka, which form a part of the Russian Empire, or Russia in Asia.

266. *The peninsula of Asia Minor* projects towards the West, forming the Asiatic portion of the Turkish Empire. *The peninsulas of Arabia*, *Hindoostan*, and of *Chin-India*, (or India beyond the Ganges,) extend towards the South. They are divided among a number of distinct states.

P. D. 263. What is the central table land of Asia usually called? Where do the countries lie that form the Chinese Empire? What are they? 264. Into what kingdoms is the western table land divided? What declivity lies north of Persia? 265. How is the northern declivity of Asia occupied? To what empire does it belong? 266. What peninsula of Asia lies on the West, and to what empire does it belong? What peninsulas extend toward the south? How are they divided?

267. *On the eastern coast*, the islands of Jesso, Niphon, and Kiusiu, are united in the Empire of Japan.

EXERCISES ON THE MAPS.

Political Map of Asia.—What parts of Asia does the empire of China occupy? Where are the kingdoms of Persia, Afghanistan, and Beloochistan? What states and tribes are found on the declivity towards the Caspian Sea? To what empire does the northern declivity of Asia belong? What peninsula of Asia lies on the W.? To what empire does it belong? What are the three southern peninsulas? How are they divided?

What islands are there on the eastern coast? Which are the largest? Which three form a distinct empire? (¶ 267.) What group of islands on the S. E.? What large island S. of Hindoostan? What groups of islands in this part of the Indian Ocean?

How is Siberia bounded? What are its chief towns? How is Independent Tartary bounded? Chinese Tartary? What states and towns do you find in each? Describe the boundaries and capital of China. Of Japan. Of Anam. Of Siam. Of Burmah. Of Hindoostan. Of Beloochistan. Of Afghanistan. Of Persia. Of Arabia. Of Turkey.

(**II.**) Between what latitudes does Asia lie, and in what zones? What countries of Asia are in the same latitude with British America, or N. of latitude 45° N.? What in the latitude of the Northern United States, or from 40° to 45°? What in that of the Central and Southern States, or from 30° to 40° N.? In that of Florida and the Bahama Islands, from 20° to 30°? In that of the W. Indies, Mexico, and Central America, from 10° to 20°?

What places in Siberia are nearly in the latitude of St. Petersburg? What towns and mountains are nearly in latitude 51½° N., or in that of London? What important places are from 39° to 41°, or nearly in the latitude of Madrid, Naples, and New York? What remarkable places do you find in latitude 30° to 33°, or that of New Orleans, Natchez, and Savannah, in the United States? Near what remarkable places does the Tropic of Cancer pass? Does the equator cross any part of Asia?

Between what longitudes does Asia lie? What is the difference of time between Turkey and Japan? What between Turkey and London? Turkey and Philadelphia? China and Philadelphia?

AFRICA.

268. Africa is a peninsula projecting from Asia, and is the second grand division of the world in size.

269. It is a body without *members;* and if we draw around it an oval figure, resembling an egg in shape, *we shall include nearly all its projections*, and find no considerable indentations on the sea, except the Gulf of Guinea.

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267. What islands and empire on the eastern coast? (Ex.) **A.** 268. What is Africa? What is its comparative size? 269. What figure will enclose it?

270. Hence Africa has less *sea-coast* and commerce, in proportion to its size, than any other portion of the world.

It is the least *known* of all the grand divisions of the continents, in consequence of this limited commerce, and also of its extensive deserts and unhealthy air, which render it dangerous to travel through it.

(61) *Africa.*

EXERCISES ON THE MAPS.

Physical Map of Africa. — What is Africa, and what is its comparative size? (¶ 268.) How is it bounded? What isthmus connects Africa with Asia? What sea and straits separate it from Asia? What channel from Madagascar? What gulf do you find on the western coast? What on the northern coast? Has Africa any peninsulas?

What figure will enclose Africa? (¶ 269.) Draw the shape of an egg, and then draw the coast within and without it, as in figure 61. What proportion of sea-coast has Africa? (¶ 270.) Is it well known?

What are the most eastern and western capes? What are the most northern and southern? (*The most northern point of Africa is Cape Blanco, opposite the Island of Sicily. The most southern is Cape Aguillas; but the Cape of Good Hope is usually referred to, as being the most important point.*) What capes are there on the western coast above C. Palmas? What capes on the coast of Guinea? What capes between this and the C. of Good Hope? What capes on the eastern coast?

What great river do you find in the north-eastern part of Africa? What lake in the centre? What rivers in the middle regions, on the W.? What in Southern Africa on the western coast? On the eastern?

NATURAL AND POLITICAL DIVISIONS.

271. *Africa appears to consist of two great portions*, one projecting towards the W. and the other towards the S. They *may be divided* by a line drawn from the Straits of Babelmandel to the north-east corner of the Gulf of Guinea.

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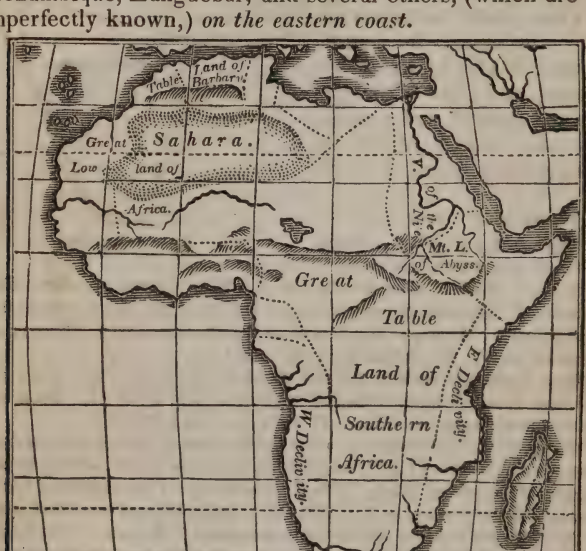
270. What can you say of the sea-coast of Africa? Is it well known? Why not? (Ex.) **N. P. D.** 271. Of what two great portions does Africa consist? How may they be divided?

272. *The southern portion of Africa, lying S. of this line, is occupied, in the centre,* by an unknown, elevated region. The English colony of the Cape of Good Hope is *on its southern coast.* The kingdoms of Southern or Lower Guinea lie *on the western coast;* and those of Caffraria, Mozambique, Zanguebar, and several others, (which are all imperfectly known,) *on the eastern coast.*



(62) *Map of Africa.*

273. *The northern portion of Africa may be divided* into the Middle Regions, extending from the line above described (¶ 271) to the Tropic of Cancer, and Northern Africa, North of the Tropic.

274. *The centre of the Middle Regions of Africa is*

272. How is the southern portion of Africa occupied? What colony on the southern coast? What kingdoms on the western coast? What on the eastern? 273. How may the northern portion be divided? 274. How is the centre of the Middle Regions occupied?

occupied by the Negro kingdoms of Soudan or Nigritia, and the Great Desert of Sahara.

275. *On the eastern coast* are Nubia and Abyssinia; and *on the western*, Senegambia, and the various kingdoms of Northern Guinea, with the little colonies of Liberia and Sierra Leone, for emancipated Africans.

276. *Northern Africa is occupied* by the Barbary States — Morocco, Algiers, Tunis, and Tripoli — on the West, and Egypt on the East.

EXERCISES ON THE MAPS.

Political Map of S. America and Africa. — How will Africa be divided by a line from Cape Guardafui to the Gulf of Guinea? (¶ 271.) What can you say of the country in the southern division of Africa? How may the northern portion be divided? (¶ 273.) What countries occupy the middle regions? What are there on the eastern and western coasts of those regions? What countries in Northern Africa? Describe the boundaries of each of these countries, beginning at the South.

What three groups of islands do you find N. of C. Blanco? What cluster off C. Verd? What three islands S. from C. Palmas? What in the Gulf of Guinea? What large one on the eastern coast? What two small ones East of this? What North of it? What in the channel of Mozambique? What Arabian island off C. Guardafui?

(**XI.**) Between what latitudes do the northern portions of Africa lie? Where does the equator pass? In what zone does the middle portion, or larger part of Africa lie? Between what latitudes does Southern Africa (¶ 271) lie? What parts of the United States are in the latitude of Barbary? What places in Africa and the neighboring portions of Asia are in the latitude of N. Carolina? Of Charleston? New Orleans? Mexico? What parts of Africa in the latitude of the West Indies? Of Venezuela? Peru? Chili? Of Lima? Of Rio Janeiro? Of Valparaiso? What is the longitude of St. Helena from London? Of Egypt? What is the difference of time between Philadelphia and Cape Town. (*See Chart.*)

OCEANICA.

277. Oceanica *embraces* the continental island of New Holland, with countless small islands.

278. They are formed into *three principal divisions.* The islands lying nearest to Asia, extending to 10° S. latitude, and 130° E. longitude, are called the *Indian Archipelago, or Malaysia.* New Holland and the adjacent

275. What countries on the eastern coast of this division? What on the western? What colonies here? 276. How is Northern Africa occupied? (Ex.) **O.** 277. What does Oceanica embrace? 278. What are the principal divisions? What islands are called Malaysia? What form Australia?

islands, together with New Zealand and the New Hebrides, form the great division of *Australia*. The remaining islands, E. of the Philippine Islands and New Zealand, are classed together under the name of *Polynesia*.

The islands of Polynesia are scattered over the ocean, like the stars in the sky; some single, and some in clusters and groups. A part of them are low islands, composed chiefly of coral rock, and a part of them are high islands, generally of volcanic rocks; as represented fig. 63 and 64.

(63) *Coral Island.*

(64) *High Island.*

279. New Holland, Van Diemen's Land, and New Zealand, are *possessed and colonized by Great Britain*; Java, and the Spice Islands or Moluccas, *by Holland*; and the Philippine Islands *by Spain*. The rest, with the exception of settlements on the coast, are occupied by *native tribes*.

The two groups of the Sandwich and Society Islands, and many natives of New Zealand, and other islands, have received the Christian religion, and are considerably advanced in civilization.

EXERCISES ON THE MAP.

Map of Oceanica. — What does Oceanica embrace? (¶ 277.) How are these islands divided? Where are the largest islands of Oceanica? What are their names? What are the chief groups of small islands? Which are N. of the equator? Which are S. of the equator?

☞ NOTE. *Those who study only the first course should now pass on to the articles in large type, in the description of countries, beginning at page 155.*

What does Polynesia include? 279. By whom are these islands possessed? Which of them belong to Great Britain? To Holland? To Spain? To native tribes? What can you say of the Sandwich and Society Islands? (Ex.)

II.* PHYSICAL GEOGRAPHY.

SURFACE OF THE LAND.

ELEVATIONS AND DEPRESSIONS.

280. *The land rises* above the water, in some parts a few inches, in others, several thousand feet; and *this height is generally measured* from the level of the sea.

281. Those parts of the earth which are not more than 500 or 600 feet above the level of the sea, are called, by geographers, *lowlands*. Those which have more than this elevation, are sensibly cooler than low countries, and are called *highlands*.

282. Highlands and lowlands are *the two great divisions of the surface of the earth;* and it is *important to know the elevation of a country*, as well as its latitude, in order to judge correctly of its climate and productions.

Thus the sea-coast of the Southern United States, which is very little elevated above the level of the ocean, is excessively hot in summer; while the high country among the mountains, in the same latitude, (such as the great valley of Virginia,) is cool and pleasant. The highest peaks in the southern part of Spain are covered with snow, while oranges are growing on the low grounds near them.

283. *The surface or face of a country*, both in the highlands and lowlands, is sometimes level, and sometimes uneven. When it is level, it is called *a plain*. When it is uneven, like the sea covered with waves, it is called *a waving or undulating country*, and differs little from a plain.

In the Western United States there is a great deal of waving land, which is there called *a rolling country*.

284. When the elevations of the surface are considerable, a country is called *hilly* or *mountainous*. If it is covered with mountains, it is a *mountain land*.

285. *The face of a country*, connected with its elevation, has great *influence* on its climate and productions, and even on the character of its inhabitants.

S. L. 280. Which is the lowest portion of the surface of the earth? What can you say of the land? How is this height generally measured? 281. What are lowlands? What are highlands? Do they differ in temperature? 282. What must we know to judge correctly of the climate of a country? 283. What is said of the surface of a country? When is it called a plain? When is it called a waving country? 284. When is a country called hilly or mountainous? When a mountain land? 285. What influence has the face of a country?

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* Physical Geography is designed for the second course of study.

PLAINS.

286. *A large part of the surface of the land consists* of plains, under various names. They cover two thirds of *the surface of America and Europe*, and one third of that of *Asia and Africa*.

287. *Many plains* are among the most fertile and cultivated regions of the earth. *Others* produce only grass, and furnish pasturage to cattle; and others still are mere marshes or deserts.

SAVANNAS AND STEPPES.

288. Plains covered with grass are found in every part of North America, between the Apalachian and the Chippewan Mountains, and are called *prairies* or *savannas*. Some are of small *size*, but others extend as far as the eye can reach. *The soil* is usually very rich.

289. Such plains are common in South America, where they are called *llanos* (*le á nos*) or *pampas*, some of which are as large as the whole of Europe.

290. *Their appearance varies* materially at different seasons. *During the floods of the rivers*, a llano is covered with water, and forms a vast lake. *When the water subsides*, it becomes what the natives call "a sea of grass," growing to the height of a man. *In the dry season*, it is scorched like a desert.

291. In the south-eastern part of Europe, and in Asia, there are vast plains, resembling the llanos, called *steppes*.

292. Dry plains, producing a scanty vegetation, are found in Ohio, which are called *barrens*. Many on the coast of the United States, from New Jersey to Georgia, produce only pine-trees, and are called *pine barrens*. Many similar plains, in Great Britain and Germany, produce only the heath plant, and are called *heaths*.

MARSHES.

293. Plains which have a spongy soil retain the water which falls upon them, and become *marshes*, or swamps, consisting of half-liquid mud, sometimes of great depth, and covered with coarse grass or rushes. Men and animals often sink suddenly into them, and most of them are scarcely *passable*, except in very dry weather, or when they are frozen.

Marshes are also called bogs, moors, morasses, and in Scotland, mosses. The quicksands often found on the borders of the sea are like marshes,

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P. 286. Of what does a large part of the surface of the land consist? How much of Europe and America do these cover? How much of Asia and Africa? 287. What can you say of the soil and productions of plains? **S. S.** 288. What are prairies or savannas? What is said of their size? Of their soil? 289. What is said of the llanos or pampas of S. America? 290. How does their appearance vary? How is a llano affected by the floods of the rivers? When the waters subside, what does it become? What is its state in a dry season? 291. What are steppes? 292. What are barrens? Where do we find pine barrens? What are heaths? **M.** 293. What plains are called marshes? Describe the dangers they occasion.

except that they are composed of sand; and both, sometimes, swallow up men and animals.

294. *The Southern United States* have extensive swamps, many of which produce rich crops of rice. The marshes of Florida, called *everglades*, are almost covered with water, and are scarcely passable, except for the Indians, who inhabit the islands scattered among them, and are well acquainted with them.

295. *Some marshes, in moist and temperate countries, consist* chiefly of peat or turf, a substance composed of the roots and fibres of mosses and other vegetables, which may be dried, and used for fuel. One tenth of the surface of Ireland is covered with peat moors; and they are common in the temperate regions of Europe and North America.

DESERTS.

296. *Plains composed of sand, or sandstone*, or other rocks which allow the water to pass through them, are generally very dry. Most of them are destitute of springs and streams, and become *deserts*, especially in hot countries.

297. In most deserts, nothing *appears in view*, but a sea of sand bounded by the horizon, which is perpetually moving with the wind, or rolling in waves like the ocean.

In a few hours, hills of some height are formed. There are no permanent mountains or hills, and few trees or villages, to serve as landmarks to the traveller. He must be guided entirely by the compass or the stars. He is obliged to carry water as well as food; for it is only at great, and often at uncertain distances, that he can hope to find a single spring, or even the shade of a rock, to refresh him.

298. The *fine sands* of the desert often float in the air, like vapor. Sometimes they are raised, by whirlwinds, into *sand storms;* or in vast *columns*, whose tops are out of view.

299. In the midst of the deserts, a few spots are found, like islands in the ocean, containing springs or streams. These are called *oases*. On reaching an *oasis*, a traveller often passes at once from burning, barren sands to fertile fields, and shady groves, and beautiful villages; and sometimes finds a kingdom in the midst of deserts.

The Asiatic kingdoms of Bokhara and Khiva are oases in the midst of the desert of Tartary.

300. *A remarkable belt of deserts* extends from the western coast of Africa to the eastern part of Asia. One of these, and the most remarkable in the world, is the Sahara of Africa, a vast ocean of burning sand, 2000 or 3000 miles long, and 700 broad, with a few oases scattered through it. The Arabs call it "Sahara bela mar," or "The ocean without water."

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294. What swamps do you find in the Southern United States? What can you say of the everglades? 295. Of what do the marshes in temperate countries sometimes consist? What examples can you mention? D. 296. What can you say of plains composed of sand or sandstone? What are deserts? 297. What appears in view in deserts? 298. What can you say of the sands of the desert? 299. What are oases? What does a traveller find on reaching an oasis? 300. What belt of deserts is mentioned? Describe the most remarkable of these.

The desert of Gobi, or Shamo, in the highlands of Central Asia, is the most elevated, and one of the largest, in the world.

301. *In North America*, there is an extensive tract of sand and sandstone, East of the Chippewan Mountains, which is called the Great American Desert.

302. This region, and other *desert tracks in cold climates*, which are scorched by the sun in the summer, are desolated in winter by freezing winds and violent storms. In the steppes of Southern Russia and Tartary, the cattle, and even herdsmen, sometimes perish, and armies are scattered or destroyed by the cold and storms.

303. Many of *the deserts and steppes* are so *impregnated with salt*, that, in the dry season, it crystallizes on the surface, and forms a hard crust, or sometimes a feathery kind of vegetation, which gives the whole plain a dazzling whiteness and brilliancy.

ELEVATION OF PLAINS.

304. *Most plains* are lowlands, rising very little above the level of the sea, like those of Europe, Siberia, and South America. If the Atlantic Ocean should rise only a few hundred feet, it would cover the greater part of South America.

305. Some plains are even *below the level of the sea*. Thus the steppes around the Caspian Sea are from 70 to 100 feet lower than the Mediterranean; and Holland is so much lower than the North Sea, that it is only preserved from the waters by banks or dikes.

306. Other plains are *above the level of the sea*, and belong to the highlands. The greater part of *Mexico* lies on a level table land, 8000 feet above the sea.

MOUNTAINS AND VALLEYS.

307. Mountains *sometimes rise* singly in the midst of a plain; but they are *generally* united in groups or chains, which cover a great extent of country.

308. Sometimes several *chains run out* from a central mountain or ridge, as in the Alps; sometimes they form a number of irregular groups. The great American chain, consisting of the Andes and Rocky or Chippewan Mts., is the only one which extends thousands of miles in a single line.

309. *A peak* is one of the highest points of a mountain, or chain of

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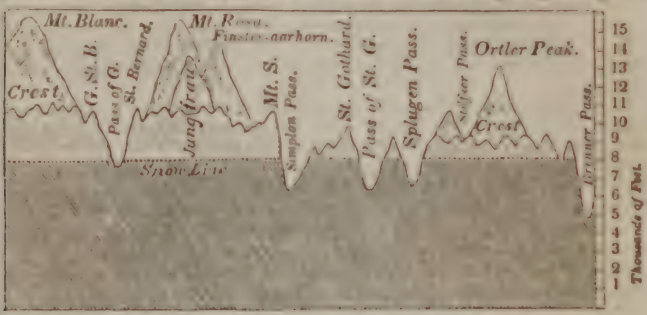
301. What desert in North America, and where? 302. What is said of the weather of the deserts in cold climates? 303. What appearance does salt produce on some of the deserts? **E. P.** 304. What are most plains? What if the Atlantic Ocean should rise a few hundred feet near S. America? 305. Can you mention any plains below the level of the sea? 306. What can you say of plains above the level of the sea? What is the case with Mexico? **M. V.** 307. How do mountains sometimes rise? How are they generally? 308. How do several chains sometimes run out? What do they also sometimes form? What can you say of the great American chain? 309. What is a peak?

mountains, and *is often called* a horn, tooth, nose, head, or bell, from its peculiar form.

310. The *crest* of a mountain chain is the line of its average height, or of its ridge, and is usually half as high as the peaks. The crest and peaks of the Central Alps are shown in the following engraving: —



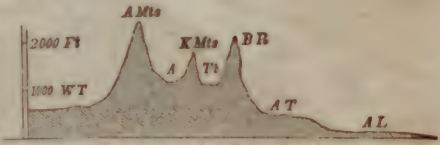
(65) *Profile of the Central Alps, with their Peaks, Crests, and Passes.*

311. When the crest of a range of mountains is nearly straight, it is called a *ridge*. When it is cut by cross valleys into numerous points, it is called by the Spaniards *a sierra*, or saw. When it spreads into a broad surface, it forms *a table land*.

312. The side of a mountain, or a tract of land sloping gradually from the highlands towards the lowlands, is called *a declivity*. The termination of a mountain declivity is called its *foot* or *base*.

313. When the descent to the lowlands is by successive steps or levels, each step is called a *terrace*.

This section represents the Atlantic Lowlands of Virginia, at A L; the Atlantic Terrace at A T; the Blue Ridge, at B R; the Katatin Mts., at K Mts., the Allegany Mts., at A Mts; the Apalachian table land, or great Valley of Virginia, at A Tb; and the Western Terrace, at W T.



(66) *Section of the Apalachian Mts.*

VALLEYS AND PASSES.

314. Valleys which lie between parallel ranges of mountains are

What other names are given to it? 310. What is the crest of a mountain chain? What is its height compared with the peaks? 311. What is a ridge of mountains? When do the Spaniards call it a sierra? When does it form a table land? 312. What is a declivity? What is its foot or base? 313. What is a terrace?

called *longitudinal* or *regular valleys*. Those which cross the ranges are called *transverse valleys*.

315. A transverse valley, through which we can go over a mountain, is called a *pass*, or, in the United States, a *notch* or *gap*. *Many of these give passage to* roads and railways, which are used in commerce, like those named on the profile of the Central Alps (65).

316. Some *valleys are on highlands*, and are very far above the level of the sea, as we may observe in the passes of the Alps on the profile. These are sometimes so *broad*, as to form table lands; as in the Andes.

317. Transverse valleys are sometimes mere *clefts* or *chasms*, shut in by perpendicular walls of rock, as in the Notch of the White Mountains, and are often called *defiles*, or *glens*.

318. A river frequently passes through a defile in the mountains, like the River Shenandoah, at Harper's Ferry. (*See engraving for Virginia.*) In opening a way through the mountains, a defile is sometimes called a *gate;* as the Gates of the Chippewan Mts., through which the River Missouri passes.

319. When a part of the rock is left, covering such a defile, it forms *a natural bridge*, like that over Cedar Creek, in Virginia.

SNOWS AND GLACIERS.

(67) *Glacier of the River Aar, in Switzerland.*

V. P. 314. What are longitudinal or regular valleys? What are transverse valleys? 315. What is a pass? What is it called in the United States? To what do many of these give passage? 316. What can you say of the height of valleys which are on highlands? What of their breadth? 317. What are defiles or glens? 318. How do rivers frequently pass through mountains? When is a defile called a gate? Give an example. 319. What is a natural bridge? Give an example.

320. *In cold countries, the tops of mountains* are covered with snow longer than the plains below, showing that they are colder. *The tops of lofty mountains* are covered with perpetual snow at all seasons, even in hot climates.

321. *The snow* which falls in the valleys *of lofty mountains, in cold climates*, melts by day, and freezes by night into masses of ice. These gradually increase, and spread through the valleys, and down the sides of the mountains, until they form a lake or river of ice, like that in the engraving 67, which is called *a glacier*.

A glacier is often several miles in extent, sometimes glittering like a plain covered with precious stones, or adorned with pyramids and blocks of ice which seem like the spires and buildings of a city of crystal. There is frequently a row of rocks upon a glacier. Those represented in fig. 61, moved with the ice half a mile in four years, with the stone hut upon them.

322. *Glaciers sometimes extend* to the cultivated fields and villages at the foot of the mountains, and sometimes destroy them. They have filled up several passes in the Alps, which were formerly open.

323. Vast masses frequently break off from the snows and glaciers of lofty mountains, and slide into the valleys below, with a tremendous roar. They are called *avalanches*; and they sometimes bury travellers, and even whole villages.

324. *The glaciers of the Polar Regions* descend to the sea, and cover the coast; and the avalanches which break from them form icebergs, or islands of ice. (*See* ¶ 114.)

325. Many *mountains rise above the common height of clouds*, so that a traveller sometimes passes through a cloud, and, at other times, sees a storm below him, while he enjoys the sunshine.

USES OF MOUNTAINS.

326. The hills, mountains, and valleys of the earth add much to the beauty of its *scenery*.

327. *They serve more important purposes* by the care and wisdom of Him who made them. They condense the vapors into rain and snow; the loftiest are covered with perpetual snow; and thus they become inexhaustible *reservoirs of water*, to supply the springs and streams which fertilize the earth.

328. But *they are especially useful* in furnishing declivities and valleys, by which the waters descend to the ocean, in living, healthful streams, instead of stagnating, as they often do in level countries, in unhealthy pools and marshes.

S. G. 320. How are the tops of mountains covered in cold countries? What can you say of the tops of lofty mountains in hot climates? 321. What is said of this snow? What are glaciers? 322. How far do glaciers sometimes extend? What have they done in the Alps? 323. What are avalanches, and what effects do they produce? 324. What can you say of the glaciers of the Polar Regions? What do the avalanches there form? 325. How high do mountains sometimes rise? What does a traveller sometimes see? **U. M.** 326. What effects have hills, mountains, and valleys, on scenery? 327. What more important purposes do they serve? In what way are they useful? 328. How are they especially useful?

HEIGHT OF MOUNTAINS.

329. *The loftiest mountains in the world* are the Himalaya Mts. in India, some of whose peaks are from 5 to 6 miles above the level of the sea.

330. The next in height are *the Andes* of South America — which are from 4 to 5 miles in height — and *the mountains of Mexico. The highest in Europe* are the Alps, about 3 miles high; and some peaks of *the Chippewan Mountains* in North America are still higher. All these, and others above 15,000 feet in height, may be considered as *mountains of the first rank.*

331. *The Pyrenees of Spain* are above 2 miles in height, and the Altaian Chain of Asia is generally about this height. These, and others from 10,000 to 15,000 feet in height, may be considered as *mountains of the second rank.*

332. *The Ural Mountains of Russia*, the Scandinavian or Dofrafield Mountains, and the Apennines of Italy, are from 5,000 to 10,000 feet high; and the Apalachian Mountains of the United States have peaks from 5000 to 6500 feet high. These, and others from 5,000 to 10,000 feet in height, may be called *mountains of the third rank.* All below 5000 feet may be classed together in *the fourth rank.*

333. *The longest chain of mountains on the globe* is the Great American Chain, including the Andes and Chippewan Mountains; and the next, the North Asiatic, or Altaian Chain.

The length of other chains may be seen in the following table :—

	Miles.		*Miles.*
The Andes	4,500	Scandinavian (Dofrafield) Mountains,	1,000
Mexican and Chippewan Mts.,	7,000	The Alps,	600 to 700
Whole American Chain,	11,500	The Apennines,	
Altaian Mountains,	5,000	Carpathian Mountains,	500
Himalaya Mts.,	1,500	Green Mountains,	350
Ural Mountains,		The Pyrenees,	200
Mt. Atlas,			
Apalachian Mts,			

ISLANDS.

334. Islands are the tops of mountains or table lands, whose base is in the bed of the ocean, and whose valleys and passes are filled with its waters. See figure 48, p. 53.

H. M. 329. What can you say of the loftiest mountains of the world? 330. What of the height of the Andes of S. America and the mountains of Mexico? What are the highest in Europe, and how high? What mountains in N. America are still higher? What rank of mountains do these form? How high is the first rank? 331. How high are the Pyrenees? Where are they? What other mountains of this height? To what rank do these belong, and what is its height? 332. How high are the Ural Mountains? What other mountains of this height? To what rank do these belong, and how high is it? What is the 4th rank? 333. What is the longest chain of mountains on the globe? **L.** 334. What are islands?

335. They have all the *varieties of situation and appearance* which belong to mountains; some rising alone, like insulated mountains, as the celebrated rock of St. Helena; others arranged in groups; and others still in chains.

336. Along the coast of the continents we find ranges of islands, which are usually long and narrow, with their points turned towards each other, like those E. of Asia. They are called *continental islands;* and appear like chains of mountains, torn from the main land, and partly sunk in the ocean.

A chain of continental islands extends along the eastern coast of Asia, from Kamschatka to Malacca. Others bend around the shores of New Holland, the northern coast of South America, the northern and southern extremities of the western continent, and the north-western coast of Africa. The British Isles form, in the same manner, an outpost to Europe; and the coasts of Norway, Denmark, Holland, Greece, and New England, are bordered by similar chains of small islands.

337. *The round or elliptical islands* are generally found in the midst of the sea, either alone, or forming groups rather than chains, as in the Pacific. These islands become the great hotels of the ocean, to which the seaman resorts for refreshment and intercourse; like St. Helena and the Sandwich Islands.

338. In the Torrid Zone there are small, marine animals, called coral polypi, that build the *coral, or madrepore rocks*, as their dwelling-place, and thus form reefs which surpass in extent the proudest works of man.

339. When these rocks reach the surface, the sea throws up sand, earth, shells, and the seeds of plants and trees, so that many *at length become* islands, covered with soil and vegetation, and fit for the residence of man.

On the coast of New Holland, there is a reef of coral extending 750 miles; and many of the islands of the Pacific Ocean are composed entirely of coral.

INTERIOR OF THE EARTH.

340. In the rocks and mountains of the earth we sometimes find holes which are called *cavis* or *caverns*, and artificial caverns have often been dug to form dwellings or tombs, or as mines from which to obtain useful metals and minerals. But these openings have not been examined even to the depth of a mile *below the surface of the earth*.

341. We therefore *know* little *of the interior of the earth;* but we find, so far as we can go, that it is composed of the same rocks and minerals which are found on the surface.

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335. What is said of their situation and appearance? 336. What are continental islands? 337. Where are the round or elliptical islands, and what is said of them? 338. How are the coral or madrepore rocks formed? 339. How do they at length become islands? **I. E.** 340. What are caves or caverns? How far below the surface of the earth have they been examined? 341. What do we know of the interior of the earth?

342. *In digging or boring in the earth to a great depth*, we find the heat increasing as we descend. In all parts of the globe, hot springs are also found, often rising from a great depth. Many of these have been equally hot since the time of the Romans, 2000 years ago.

343. *This shows us*, that there are fires within the earth. They are also seen bursting out from volcanoes, and from openings made by earthquakes, in all the grand divisions of the world, and even amidst the snows and ice of the Frigid Zones.

CAVES.

344. *Some caves* are large and lofty, and some extend horizontally for miles into the earth, containing lakes and streams of water, of unfathomable depth. *Others* are remarkable for the beautiful minerals found in them; or, like the Cave of Gailenreuth, represented in the engraving 68, for the vast collections of bones of animals which they contain. The hollow sound of the ground under our feet will often show us where caves exist.

(68) *Section of the Cavern of Gailenreuth, in Germany.*

345. *One of the most extensive caverns known* is the Mammoth Cave of Kentucky, which has been explored for the distance of several miles, and contains a hotel.

346. *Fingal's Cave*, in the Scottish island of Staffa, is one of the grandest caverns known, formed of pillars of the rock called basalt, so regular that they appear like hewn stone. It is 117 feet high at

342. What do we find on digging or boring into the earth? How long have some of the hot springs been equally hot? 343. What does this show us? How else are they seen? C. 344. What is said of caves? 345. What is one of the most extensive known? 346. Describe Fingal's Cave.

its mouth, and is thus opened to the light, as well as to the sea, which rolls into it.

347. *Caves are common in limestone* countries. The water, trickling through their sides and roof, dissolves some of the lime, and, in dropping, forms crystalline limestone.

348. In many cases *it forms stalactites*, which hang like icicles from the roof. These often descend in pillars to the floor, or unite in curtains that cover the sides, and glitter, by torch-light, like precious stones.

349. The Grotto of Antiparos, in Greece, and Weyer's Cave and Madison's Cave, in Virginia, and the Mammoth Cave represented in the description of Kentucky, (p. 205,) are among *the most grand and beautiful caves of this kind*.

350. Few caves are so *deep* that we can perceive the internal heat of the earth. (*See* ¶ 342.) But the changes of seasons affect them so little, that they preserve nearly the same *temperature* at all times, and feel cool in summer and warm in winter.

Hence persons in feeble health have lived in the hotel built in the Mammoth Cave of Kentucky, during the winter, to avoid the severe cold.

STRUCTURE OF THE EARTH;

OR, SOILS, ROCKS, AND MINERALS.

351. *The solid body of the earth is composed of* rocks and soil of various kinds; and we find the same kinds on islands and continents, in all parts of the world, and in the bed of the sea.

352. *Soils are divided* into various classes, of which the principal are composed either of *sand*, of *clay*, of *loam*, which is a mixture of sand and clay, of *mould*, consisting chiefly of decayed vegetables, or of *gravel*. Some soils are composed principally of lime.

353. *The rocks are composed* chiefly of the same substances, mingled together, and changed into various forms by water and fire.

354. *The principal rocks*, sandstone, slate or clay stone, granite, and limestone, (which includes marble,) are used for building, and are found in all parts of the world, in great quantities.

355. *Among these rocks we find* coal, salt, iron ore, and gypsum, or plaster of Paris, scattered in abundance; and these are sometimes in sufficient quantities to form mountains. *Turf, or peat*, is a val-

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347. Where are caves common? What effect has the water here? 348. What are formed in many cases? Describe them. 349. What are some of the most beautiful caves of this kind? 350. Can we perceive the internal heat of the earth in caves? What is said of their temperature? What is said of the Mammoth Cave of Kentucky in this respect? **S. E.** 351. Of what is the solid body of the earth composed? 352. How are soils divided? Mention and describe them. 353. Of what are rocks composed? 354. What can you say of the principal rocks? 355. What do we find among these rocks? What is the use of turf or peat?

uable fuel, which is common in the marshes of cold countries; and beds of coal are most common in these countries.

356. We also find many *other useful minerals*, of which the most valuable are the ores of the metals, the precious stones, the salts used in medicine, and the inflammable minerals, sulphur, bitumen or asphaltum, and amber.

357. *The most useful metals*, iron, lead, and copper, *are found* abundantly in most parts of the world. Tin, zinc, mercury, and *other metals*, are found less abundantly, but in sufficient quantities for our use.

358. *The precious metals* are the most rare. *Silver* is most abundant in South America and Mexico; and *gold* in South America and Africa; although both are found in other parts of the world. *The diamond, ruby, and other precious stones*, are obtained chiefly from South America, and Southern Asia and its islands.

359. *Sulphur* is abundant in most volcanic countries, and seems to form a large part of the fuel of their fires. *Other minerals are found* in various parts of the earth, but not in large quantities.

360. *The soil of a country is called fertile*, when plants grow well and abundantly upon it. It is *barren*, when it produces few and poor plants.

361. Soils of mould and loam are *the most fertile*, and supply us with most of our food. *Soils consisting only of clay* are less fertile. *Sandy, stony, and rocky soils*, are generally barren; but they are sometimes the most rich in minerals.

362. We can see *the kindness and care of Providence*, in making the most useful rocks and minerals most common, so that they render many barren regions valuable; and in making coal and turf most abundant in cold countries, where they are needed for fuel.

EFFECTS OF INTERNAL FIRES;

OR, VOLCANOES AND EARTHQUAKES.

363. The internal fires of the earth sometimes burst out, and this is called *an eruption*. The mountain or place from which they break out is called *a volcano*, like Mt. Etna. The opening is called *the crater;* and the engraving 70 shows the crater at the top of Mt. Etna.

364. *Some volcanoes throw out* streams of red-hot, melted stones,

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Where are beds of coal most common? 356. What other useful minerals do we find? 357. Where are the most useful metals found? What other metals are mentioned? 358. What is said of the precious metals? Where is silver found most abundantly? Where gold? The precious stones? 359. Where is sulphur abundant? Where are other minerals found? 360. When is the soil of a country called fertile? When barren? 361. What soils are most fertile? What soils less so? What can you say of sandy, stony, and rocky soils? 362. How are the care and kindness of the Creator seen? **V. E.** 363. What is an eruption, or what is a volcano? What is a crater? 364. What do some volcanoes throw out?

(69) *Mount Etna by Moonlight.*

called lava, and showers of stones and ashes. *Others throw out* only hot water and mud, as is generally the case with those of South America. The ashes, lava, and mud thrown out from a volcano, sometimes cover extensive tracts of country, and bury whole cities.

The cities of Herculaneum and Pompeii, in Italy, were buried in the ashes and lava of Vesuvius, A. D. 79, and the mud of volcanoes has desolated extensive regions in the Indian Archipelago.

365. *Earthquakes* are tremblings of the earth which usually take place when a volcano is not in eruption, and in many countries where none are found. *They sometimes cause* the earth to shake and heave, like the sea in a storm. They even throw down buildings, and often destroy whole cities in a moment.

366. Earthquakes sometimes open *chasms in the earth*, which throw out flames, and swallow up all that is around. In other cases, they throw up *new mountains and islands*, which are generally volcanic.

The city of Port Royal, in Jamaica, was swallowed up during an earthquake. The volcano of Jorullo, 1640 feet in height, was thrown up by an earthquake on a plain in Mexico, in 1759. (*See p. 216.*) Several of the Greek islands in the Ægean Sea arose in this way. In 1811, a new volcano rose up near the Azores; and in 1813, another near Sicily; but both have since disappeared.

367. *Earthquakes generally precede* the eruption of a volcano, and are most violent at a distance from it. *They usually cease* as soon as an eruption begins; and frequently begin when it ceases.

What do others throw out? What is said of the ashes, lava, and mud thrown out from a volcano? Give examples. 365. What are earthquakes? What effects do they sometimes produce? 366. Do earthquakes ever produce openings or elevations of the earth? 367. What do earthquakes generally precede? When do they generally cease?

368. *This shows us*, that eruptions and earthquakes are both produced by the same internal fires. They are caused undoubtedly by the expansion or explosion of steam, or inflammable air; as in the bursting of a cannon, or of the boiler of a steam-engine.

369. *Hence we see, also*, that volcanoes are the safety-valves, or chimneys, through which these vapors find vent; and we perceive the goodness of the Creator, even in their terrible eruptions, which prevent the more extensive destruction of earthquakes. At the same time, we see in both some of the most striking exhibitions of his power. "He looketh on the earth, and it trembleth. He toucheth the hills, and they smoke."

370. More than 300 *volcanoes are known to exist* in the world; of which one third are in America, one third in the islands of Oceanica, and the remainder on the Eastern Continent and its neighboring islands.

371. *A range of volcanoes*, some burning, and others extinguished, extends along the Andes, from the southern part of South America to Mexico; and we find others in this range, near to Beering's Straits. *This range is continued* on the western coast of the Pacific Ocean, through Kamschatka and Japan, to the East India Islands.

(70) *Crater of Mount Etna.*

372. *Most of the islands of the Pacific*, and many of the *Atlantic* and *Indian Oceans*, are also volcanic, or else composed of volcanic rocks.

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368. What does this show? How are they probably caused? 369. What do we thus perceive of the goodness of the Creator? 370. How many volcanoes are known to exist, and where? 371. What volcanoes in South America and Mexico? Where is this range continued? 372. What islands are volcanic?

373. *The most ancient volcanoes known* are Mt. Vesuvius in Italy, Mt. Etna in Sicily, and Stromboli, one of the Lipari Islands, near Sicily. Stromboli burns continually, and is called "the great lighthouse of the Mediterranean."

374. *One of the most remarkable volcanoes in the world* is that of Kilauea, in the Sandwich Islands, which burns continually, and whose crater contains a sea of red-hot, melted lava, sometimes several miles in diameter.

375. *The loftiest volcanoes known* are those of Orizaba in Mexico, and Antisana and Aconagua in South America, which are from 3 to 5 miles in height.

376. As volcanoes exist in most parts of the world, *earthquakes also frequently extend* to distant countries at the same time. *The earthquake of Lisbon* in 1755, in which St. Ubes, in Portugal, was swallowed up, was felt in New England; and that which destroyed *Caraccas*, in South America, in 1812, and buried 20,000 people, was felt in many parts of the United States.

WATERS OF THE LAND.

SPRINGS.

377. A part of the water which falls upon the land, in rain and snow, collects beneath the surface, and forms *springs*. Some of these rise to the surface, while others are found only by digging wells.

378. *Springs on the surface* usually flow out in little streams called rivulets or brooks. But some seem to flow from a cavern, and are so large as to form a river at once; *like the Fountain of Vaucluse*, in Southern France.

A few springs *rise in a fountain*, or throw up a stream of water to a great height, like the hot springs of Iceland, called the Geysers, which sometimes throw up their waters more than 100 feet, as represented in the engraving 71.

(71) *The Geysers.*

379. Springs are frequently *pure;* but many dissolve some of the minerals of the earth in passing through it; and are thus made "*hard*," as it is termed, or unfit for dissolving soap and washing clothes.

373. What are the most ancient volcanoes known? 374. What is one of the most remarkable volcanoes in the world? Describe it. 375. What are the loftiest volcanoes known? 376. What is said of the extent of earthquakes? Give examples. **S.** 377. How are springs formed? Where are they found? 378. What is said of springs on the surface? What is said of those that rise in fountains? Give an example. 379. What can you say of the purity of springs?

380. Springs which pass through beds of salt, become *brine springs*, and salt is obtained from them by evaporation, as it is from sea-water.

The state of New York, and the Western United States, have many valuable brine springs, which supply them with large quantities of salt.

381. *In countries where limestone abounds*, the springs generally contain lime, and sometimes so much, that twigs, leaves, and other things which fall into them, are covered with a crust of lime, which takes their shape when they decay, and forms a petrifaction. These are called *incrusting* and *petrifying springs*.

382. Many springs contain medicinal minerals; and others are warm or hot. Both are used in the cure of diseases, and are called *mineral springs*.

RIVERS.

383. *Rivers sometimes flow* from a single spring, or lake, or glacier. But *generally they are formed* by a number of rivulets or brooks united, which flow from the highlands; and their waters are finally emptied into the sea.

384. The place from which a river flows is called its *source;* and the place where it empties itself is called its *mouth*. The small streams which unite to form it are called its *branches*.

385. *The bed of a river* is the hollow in which it flows. *The channel* is the deepest part of its bed.

386. The tract of country occupied by a river with many branches, is commonly a valley, surrounded on three sides by highlands, and hence it is generally called *the basin of the river;* as the basin of the Mississippi.

387. The ridge or elevation which divides the basins of rivers is called *the water-shed*, because the waters flow from it in opposite directions; or, in the United States, *the height of land*.

388. The waters of a country usually flow from the highest parts, and descend, through its valleys, to the lowest. Hence we may generally consider the bed and mouth of a river as *the lowest parts* of its basin; and we may find out the declivities or slopes of a country, in most cases, by tracing on the maps the course of its principal streams, as they descend from their sources to their mouth.

Thus, in looking at a map of North America, it is evident, from the course of the rivers falling into the Atlantic Ocean, that the declivity of the Atlantic States is towards the S-E. It is also evident that there are declivities in different directions around Hudson's Bay. On the map of Europe, Spain will be seen to have several declivities; Italy, two principal ones,

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380. What is said of brine springs? 381. What is there remarkable in the springs of limestone countries? What are these springs called? 382. What do mineral springs contain? How are they used? R. 383. How do rivers sometimes flow? How are they generally formed? 384. What is the source of a river? What is its mouth? Its branches? 385. What is the bed of a river? The channel? 386. The basin? 387. What is a water-shed? What other name is given to it? 388. How do the waters of a country usually flow? What may we consider the lowest parts of the basin? How may we ascertain the declivities of a country?

and several may be observed around the Baltic Sea, forming one basin. (*See* ¶ 119.)

EXERCISES ON THE MAPS.

Trace the rivers of Northern Asia, and find in what direction the land slopes. What other declivities in Asia? Which appears to be the highest portion of Asia? Trace the declivities of North and South America in the same manner. Describe the declivities around the Baltic and Mediterranean Seas. Describe those of France and Italy.

SOURCES AND FALLS OF RIVERS.

389. We see on the maps, that *rivers which rise in the same highlands, often flow* into different and distant seas. Thus the streams which rise *in the Chippewan Mountains*, in North America, send their waters to the Arctic Ocean on the North, and the Gulf of Mexico on the South — to Hudson's Bay on the East, and the Pacific Ocean on the West.

390. Hence the sources of rivers are often so near each other, that goods can be carried easily from one to the other. The passage is called *a portage*, and, in many cases, becomes an important channel of commerce. In other cases, *the sources are united*, especially at high water, as in the Illinois and Chicago Rivers of Illinois, so that boats pass from one to the other.

Douglas found a lake on the Chippewan Mts. which flows on the E. into the Saskatchawan River, and on the W. into the Columbia. Similar examples occur elsewhere.

PORTAGE is from the Latin word *porto*, to carry.

391. *The course of rivers is sometimes interrupted* by hills or mountains, and then *they spread* into lakes, until they rise so as to overflow their banks. *In other cases*, they flow through a defile or chasm in the mountains.

392. When a river flows down a steep but regular descent, it forms *rapids;* when it falls over a precipice, it forms *a cataract;* and when it falls over several successive descents, it is often called *a cascade*. All these rapid portions of a river are also called *falls;* but this name is most frequently given to cataracts and cascades.

393. *The rivers of hilly and mountainous* countries abound with falls, many of which are remarkable for their beauty or grandeur.

394. *The Falls of Niagara*, in North America, surpass all others known, in grandeur. The whole waters of the lakes here pass through a channel three quarters of a mile wide, and fall, with a cloud of spray, and a noise like that of thunder, over a precipice 160 feet high.

Ex. **S. F. R.** 389. How do rivers that rise in the same highlands often flow? What is said of the streams that rise in the Chippewan Mountains? 390. What is a portage? How are the sources of rivers in other cases? Give examples. 391. How is the course of rivers interrupted? How do they then spread? What takes place in other cases? 392. What are rapids? What is a cataract? A cascade? What are all these called? How is this name most frequently used? 393. What can you say of the rivers of hilly and mountainous countries? 394. Describe the Falls of Niagara

395. *The most celebrated falls on the Eastern Continent* are those of the Rhine and the Nile; but these do not exceed 70 feet in height. *The highest* are those of small streams, in the mountains of Norway and Switzerland, some of which are from 400 to 1000 feet high. The Cataract of Tequendama, near Bogota, *in South America*, is 600 feet high.

396. *The falls of rivers obstruct* navigation; and hence *the rivers of hilly and mountainous countries* are generally not navigable.

397. *But they are very useful* in moving machinery, and furnish valuable mill-seats, for manufacturing establishments. *These frequently increase* to large towns, like Lowell in Massachusetts, Paterson in New Jersey, and many others in the United States.

398. The streams of level countries are less rapid, and more frequently navigable; but are destitute of falls and mill-seats, and often form unhealthy lakes or swamps.

COURSE OF RIVERS.

399. *The course of a river* may generally be described in *three portions* — (1) the upper course, in which the waters unite; (2) the middle course, or main body of the stream; and (3) the lower course, connected with its mouth.

400. *The upper course* is usually among the hills and mountains; and therefore is generally very rapid and shallow, abounding in falls, which render it almost useless for navigation.

401. *In the middle course* the descent is not so great, the stream is deeper and less rapid, and has few falls. It generally winds through a serpentine bed, and is navigable for boats

402. *The lower course*, from the last fall to the mouth, usually has a powerful but gentle current, often navigable for sea vessels. It frequently spreads into numerous branches.

Thus the Rhine and Rhone wind down the mountains, in their upper course, with a rapid current and frequent falls. After spreading each into a lake, they flow more slowly, and are navigable in their middle course. In their lower course, they spread into broad, winding, gentle streams, and branch out each into a delta.

In the engraving, p. 115, the course of such a river is represented, flowing between a mountain land on one side and a table land on the other, to its middle and lower course.

Thus, also, the Mississippi, traced by its main stream, the Missouri, is a mountain torrent in its upper course. Below the Great Falls, it has a long and rapid, but navigable, middle course; and, on reaching the lowlands of the Gulf of Mexico, enters on its lower course, spreading in numerous

395. What are the most celebrated falls on the Eastern Continent? What are the highest? What cataract in South America, and how high? 396. How do the falls of rivers affect navigation? What is said of the rivers of hilly and mountainous countries in this respect? 397. How, then, are they useful? Give examples. 398. What can you say of the streams of level countries? What do they often form? **C. R.** 399. In how many portions may the course of a river generally be described? What is the first? The second? The third? 400. Where is usually the upper course? What effect has this? 401. What is said of the middle course? How is it as to navigation? 402. How is the lower course described? Give examples.

channels and bayous, and terminating in a delta. The upper course of the Connecticut extends nearly to Haverhill, unfit for navigation. The middle course, to Hartford, is interrupted by falls, but still is generally navigable for boats. The lower course, below Hartford, receives the tides, and is navigable for sea vessels of some burden.

The following engraving represents a part of the middle course of the Connecticut River, as seen from Mount Holyoke, near Northampton in Massachusetts. We see here its serpentine form, like that which most rivers take in their middle course.

(73) *Connecticut River, as seen from Mount Holyoke.*

403. *Every river* has not all of *the parts just described.* Some flow directly from the mountains into the sea, and have no middle or lower course; like those of Norway. Others flow from low swamps, or lakes, and have only the lower course; like some in the Southern United States.

404. *The descent of rivers in their upper course* is often very great, while *in the lower course*, the ground is almost level.

Thus the Amazon rises at the height of 10,000 feet in the Andes; but in its lower course, it descends only 40 feet in 400 miles.

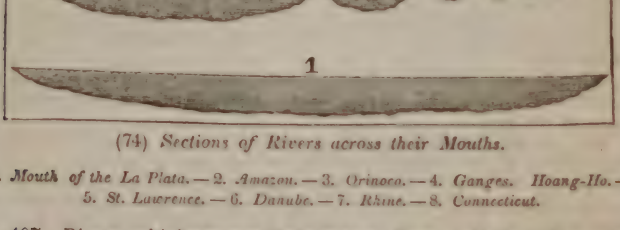
UNION OF RIVERS.

405. The basins of rivers are sometimes so nearly on a level that *their waters flow together*, usually in the middle or lower course. Thus, the Cassiquiari, a large, navigable stream, unites the Orinoco with the River Negro, a branch of the Amazon, so that these two great rivers are connected.

403. Has every river all the parts described? How do they vary? 404. What can you say of the descent of rivers in their upper and lower course? Give an example. **U. R.** 405. Where and how do the waters of rivers flow together?

406. This kind of union occurs most frequently in such as pursue nearly a parallel course; as in the rivers of Chin-India, and the Ganges and Burrampooter, of India. It is found, also, in those whose sources are near each other, but which separate widely in their middle courses, and unite in their lower courses; as in the Euphrates and Tigris, and the Hoang-Ho and Yang-tse-Kiang, of China. Such rivers are called *twin streams*.

MOUTHS OF RIVERS.



(74) *Sections of Rivers across their Mouths.*

1. *Mouth of the La Plata.* — 2. *Amazon.* — 3. *Orinoco.* — 4. *Ganges. Hoang-Ho.* — 5. *St. Lawrence.* — 6. *Danube.* — 7. *Rhine.* — 8. *Connecticut.*

407. *Rivers* which empty their waters *from a high, rocky coast*, generally have a single, deep mouth, sometimes called *an estuary*, or, in Scotland, *a frith*.

408. *On low coasts*, bordered by sands or marshes, the current and waves check each other, and often drop the sand and mud they contain at the mouth of a stream, so as to form a shoal or bar.

409. These shoals frequently rise above the water, and enclose a shallow lake, called *a lagoon*, or sometimes *an inlet*.

410. On other coasts of this kind, the mouth of a river divides into several branches, separated by islands, as in the Mississippi and the Nile. It is then called *a delta*, from its resemblance to the Greek letter Δ (*delta*) in its form, as in the Nile, in Africa. (*See map of Africa.*)

411. *The width of a stream sometimes varies* with that of its valley; but *generally it depends* on the quantity of water. The preceding sections of the mouths of some of the most remarkable rivers will show the vast difference in their breadth and depth.

Thus it will be seen that the La Plata equals many rivers like the Orinoco, in size, and that the Amazon is equal to 100 or 200 such rivers as the Connecticut in its quantity of water.

Give an example. 406. Where does this union most frequently occur? What are twin streams? Give examples. **M. R.** 407. What can you say of rivers which empty from a high, rocky coast? What is this called? 408. What takes place as to rivers on low coasts? 409. What is a lagoon? What other name is given to it? 410. What is a delta? Why is it so called? 411. How does the width of a stream vary? On what does it generally depend?

FLOODS OF RIVERS.

412. In the season of rain, and at the time the snow melts, most rivers are so filled with water that they overflow their banks, and produce *a flood*, which sometimes covers the lowlands for many miles around.

413. *In the Torrid Zone, and in warm countries*, floods usually take place in winter; and *in cold countries*, in the spring and autumn.

414. The floods of rivers are *sometimes very destructive*, sweeping away even houses and villages, with their inhabitants. But *they are generally* very useful, not only by watering the lands which they cover, but by leaving upon them a slime, or mud, which makes them very fertile.

The banks of the Connecticut, the Ohio, and many American rivers, are made rich by floods; and Egypt would produce nothing without the floods of the Nile.

415. *In cold countries, the rivers are closed* with ice for a few months of winter, and in the Frigid Zone, they are frozen during most of the year.

416. *In the Torrid Zone, the streams* are useful chiefly in winter. Many even of the large streams are almost dry *in summer;* so that the people in that zone have a name for "rivers without water."

417. *Rivers fertilize the land*, not only by their floods, but by spreading out on both sides beneath the surface. *This may be seen* by the water which is found in digging near a river, on reaching the level of the stream. On the borders of the Nile, it has been found to extend several miles.

PRINCIPAL RIVERS OF THE WORLD.

418. *The most extensive basins, and the largest rivers, are found* on the Western Continent. The Amazon, the La Plata, the Mississippi, and the St. Lawrence, surpass in size, and in the extent of their basins, all other rivers on the globe, except the Oby of Siberia.

The basin of the *Amazon* is equal in extent to one half of Europe; its length is between 3,000 and 4,000 miles; and its mouth 50 miles in width, so that the navigator can see but one bank. The *Mississippi* is equally long, with a basin equal to one third of Europe. Its breadth is $1\frac{1}{2}$ miles, and its depth, in its lower course, 150 feet.

The waters of the *St. Lawrence* expand into a chain of lakes, which cover a surface of 90,000 square miles. The Paraguay, or *La Plata, is unrivalled* for the size of its estuary of fresh water, 150 miles wide, on which ships may sail without seeing the land. The length of these rivers exceeds 2,500 miles; and their basins are equal to one third of Europe in extent, comparing in both respects with the River Oby.

F. R. 412. What is a flood in a river? 413. When do floods usually occur in the Torrid Zone, and in warm countries? When in cold countries? 414. What is said of the destructive effects of floods? How are they useful? 415. When are the rivers closed in cold countries? When in the Frigid Zone? 416. When are rivers most useful in the Torrid Zone? What is their state in the summer? 417. How do rivers fertilize the land? How may this be seen? **P. R.** 418. Where are the most extensive basins and largest rivers found? Give examples.

419. The American rivers are equally remarkable for *the extent of their navigation*. Steamboats can ascend the Mississippi more than 3,000 miles, and the Missouri nearly 4,000 miles, from the sea.

The Amazon is navigable for large ships for 2,000 miles, and for smaller vessels for the greater part of its course. The St. Lawrence, except in two or three points of interruption, is navigable for ships for a distance of 580 miles direct from the ocean.

420. *Next in rank* are the Hoang-Ho, the Yang-tse-Kiang, and the Amoor, of China; the Lena and Jenisei, of Siberia; the Volga; and the Nile. *Their basins* are each equal in extent to the United States, east of the Mississippi. The Volga is navigable nearly to its sources, and the Nile for a large part of its course.

421. The *Orinoco*, the *Ganges*, the *Indus*, the Columbia, the Rio del Norte, the Danube, and the Euphrates, all have *basins equal* or superior in extent to the empire of Austria. The length of their windings varies from 1,300 miles, in the Ganges, to 1,800, in the Danube. *The mass of waters in the Orinoco* is such that its mouth is 25 miles wide. (*See the engraving*, p. 117.)

422. *The rivers of Europe*, except the Volga, are inferior in length to those already mentioned, though valuable for navigation. *In Africa*, the Nile is the only great river, which is well known, the Niger, is not yet fully explored.

423. Rivers may be arranged according to their length, in four ranks, as follows: —

1st Rank, exceeding 2,000 miles in length.
2d Rank, from 1,500 to 2,000.
3d Rank, from 1,000 to 1,500.
4th Rank, from 500 to 1,000.

A table of the length of the principal rivers in the world will be found in the Atlas accompanying this work.

LAKES.

424. Lakes are basins filled with water, and surrounded by land. *Some receive no rivers*, and are supplied by rain or springs. *Some*, like the Caspian Sea, *receive rivers*, but have no outlet, and these are usually salt.

425. *Other lakes receive and discharge rivers. These are really* only parts of the stream, which spreads over a basin or level tract in its course; like the great lakes of N. America.

The great lakes of N. America are only expansions of the River St. Law-

419. What can you say of the extent of navigation of the American rivers? How far is the Mississippi navigable? 420. What rivers are next in rank? How far is the Volga navigable? The Nile? 421. What can you say of the basins of other rivers? Of their length? How great is the mass of waters of the Orinoco? 422. What can you say of the rivers of Europe? What rivers are mentioned in Africa? 423. Give the extent of the four ranks of rivers. **L.** 424. What are lakes? How are those that receive no rivers supplied? What is said of those which receive rivers, but have no outlet? 425. What can you say of those which receive and discharge rivers?

rence. The Lake of Geneva, in Switzerland, is filled by the Rhone, which passes through it, and the Lake of Constance, by the Rhine.

426. *Some lakes are formed by the floods of rivers*, and dry up when the floods cease. *Others disappear, or dry up at certain seasons*, and are then filled again; but these are less common.

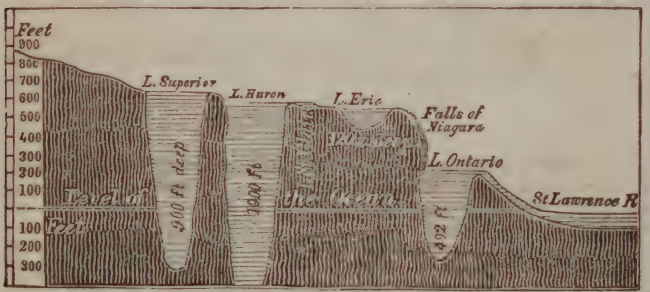
427. *North America* is distinguished for the size of its lakes, which have even been the scenes of naval engagements. *Lake Superior* is the largest body of fresh water on the globe. The lakes of Nicaragua, *in Central America*, and of Maracaybo and Titicaca, *in S. America*, are also very large bodies of water. These, as well as the great lakes of N. America, are navigable for ships of any burden.

428. *The Caspian Sea* of Asia is the largest inland body of water on the globe; but its waters are salt, and it is supposed by some to have been formerly connected with the Black Sea and the Sea of Aral.

429. *Lake Baikal* is the largest body of fresh water on the Eastern Continent, but is less than Lake Superior. Lakes Ladoga and Onega are *the largest in Europe*, but smaller than Lake Ontario.

430. *Africa* has few lakes. Lake Dembea is about equal to the Lake of the Woods in size. The Lake of Tchad, in Central Africa, is supposed to be as large as Lake Huron.

431. *Sweden, Finland, and the northern declivity of North America*, are remarkable for the number of lakes occupying deep clefts or basins in the rocks on which these countries are based. *The lowlands of Northern Germany, on the S. of the Baltic*, also abound in lakes, resembling those of flat countries generally.



(75) *Profile of the Elevation and Depth of American Lakes.*

432. *The depth of mountain lakes* is remarkable, compared with that of seas. Thus, while the Baltic Sea is about 120 feet deep, and

426. What is said of lakes formed by the floods of rivers? What others are mentioned? 427. For what is North America distinguished? Mention some of them. What are there in S. America? 428. What is said of the Caspian Sea? 429. What of Lake Baikal? What are the largest lakes in Europe? 430. What lakes are there in Africa? How large are they? 431. For what are Sweden, Finland, and the northern declivity of N. America, remarkable? What is said of the lowlands on the S. of the Baltic? 432. What is said of the depth of mountain lakes? How do the Baltic and North Seas compare with some lakes?

the North Sea does not generally exceed 400 feet, Lakes Superior and Geneva are 900, Lakes Huron and Michigan are 1,000, and Lake Constance 1,200 feet deep.

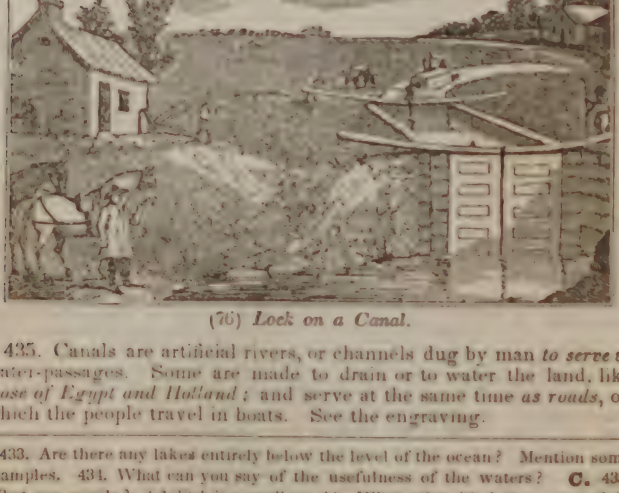
The preceding section illustrates the terraced valley of the St. Lawrence. The bottom of the American lakes is 300 feet below the level of the Atlantic; and would not be drained if every barrier were removed.

433. The surface of some lakes or *inland seas is entirely below the level of the ocean.* Thus the surface of the Caspian Sea is from 70 to 90 feet lower than the Mediterranean; and the Dead Sea, or Lake of Asphaltites, not less than 1,000 to 1,300 feet below the same level.

A table of the extent of lakes will be found in the Atlas accompanying this work.

434. *The usefulness of the waters* which adorn and fertilize the land, and support all that has life, is too obvious to require illustration. We find that even the falls of the streams, which obstruct navigation, are of great value in aiding the labors of man; and that floods, which sometimes produce desolation, are generally highly useful in enriching the soil and increasing the products of the earth.

CANALS.



(76) *Lock on a Canal.*

435. Canals are artificial rivers, or channels dug by man *to serve* as water-passages. Some are made to drain or to water the land, like *those of Egypt and Holland;* and serve at the same time *as roads*, on which the people travel in boats. See the engraving.

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433. Are there any lakes entirely below the level of the ocean? Mention some examples. 434. What can you say of the usefulness of the waters? C. 435. What are canals? (*A ditch is a small canal.*) What other kind is mentioned in Egypt and Holland?

436. *Other canals are made* entirely for navigation, so that boats or ships may pass around the falls of rivers, or across the land between two rivers or portions of water.

By the Welland Canal, vessels can pass around the Falls of Niagara, from Lake Ontario to Lake Erie; and from Lake Erie, boats can pass, by the Ohio Canal, to the Ohio and Mississippi Rivers, and the Gulf of Mexico.

437. Canals frequently pass under mountains, in *tunnels;* and over rivers, in *aqueducts*, being supplied from some high stream or lake. But generally they are carried over high land by means of *locks*, or tight reservoirs with gates, in which the boats are raised or let down from one level to another, by the water running in from above.

438. England, France, Belgium, Holland, Northern Germany, and Russia, *are crossed by canals* which unite all their principal rivers and seas, and open a water-passage through all parts of the country. The principal lakes and rivers of *the United States* are connected in the same way.

439. *The Imperial Canal of China* is the longest and largest in the world, extending more than 700 miles South from Pekin, and three fourths of a mile wide at its entrance.

440. *The second canal in the world in length* is the Erie Canal of New York, 360 miles long, connecting the Hudson River with Lake Erie, and with the canals that lead to the Mississippi River.

THE ATMOSPHERE.

441. *The atmosphere* is a hollow globe of air, enclosing the earth; and is supposed to be from 45 to 100 miles high.

442. *It contains* the vapors which form clouds, and which at last fall in mist, rain, snow, hail, and dew. *It moves* in winds, and often *changes* from wet to dry, from cold to hot, from calm to storm, and from healthy to unhealthy.

443. All these states of the atmosphere are called *climate;* and the climate of a country is said to be wet, dry, cold, hot, variable, &c., according to the weather which is most common.

444. *We live and move in* the atmosphere, almost like the fish in the sea. Our lives are sustained by breathing it; and *its climate and changes affect* our comfort and health. But the coldest as well as the hottest climates are usually pleasant to natives, or those who are born in them; and the Greenlander is not so happy in a warm

436. For what purposes are other canals made? 437. What are tunnels? Aqueducts? Locks? 438. What countries are crossed by canals? What can you say of the waters of the United States in this respect? 439. Describe the Imperial Canal of China. 440. Describe the second canal of the world in length. **T. A.** 441. What is the atmosphere? How high is it supposed to be? 442. What does it contain? How does it move and change? 443. What is climate? When is a climate said to be wet or dry, cold or hot? 444. How do we live and move in the atmosphere? What effect have its climate and changes on us? How does a climate affect natives?

climate, as in his native land, although it is covered with ice and snow.

445. *The air presses upon our bodies* on all sides, as the water does upon the fish, and keeps our blood in its place, and our bodies in a healthy state, while this pressure is regular.

446. The air grows thinner, and presses less, *as we rise above the level of the sea. When we ascend a mountain* 5,000 *or* 6,000 *feet high*, the heart beats quicker; and this, with the freshness and purity of the air, makes us, for a time, feel stronger.

447. *But a traveller on a very high mountain* pants for breath, and loses strength; and the heart beats so violently, that the blood often bursts from the mouth, and even from the eyes.

448. *Those who live in high countries* become accustomed to this thin or rarefied air, and they feel an unpleasant weight upon them when they come down to low regions.

449. *Hence we see* how kindly the Creator has made the atmosphere as we need it, to keep us in life and health; and still has fitted us to bear its changes when we are accustomed to them, and to live in all parts of the world.

WIND.

450. *Wind* is air put in motion, and is caused by the different degrees of heat in various parts of the earth.

451. *The* air always rises *when it is heated;* while that from colder regions rushes in to supply its place, just as the hot air rises over a fire, and the cold air rushes in and produces a wind which we call a draft.

452. In islands, and places near the sea, in warm climates, there is usually a wind from the land in the morning, and from the sea in the afternoon, called *land and sea breezes.*

453. *In the Torrid Zone*, which is the hottest part of the earth, the air is most heated, and rises continually; while the colder air rushes in from the North and South, to take its place.

454. At first, this causes North-East and South-East winds, in consequence of the motion of the earth; and in coming near the equator, they become at last easterly winds. These winds blow at all seasons in the Torrid Zone, and are called *trade winds.*

455. In the Indian Ocean, there are winds called *monsoons*, which blow half the year from the N.E. and the other half from the S.W. Similar winds prevail on the western coast of Mexico.

456. *Hurricanes* are violent storms, generally occurring in hot countries, in which the wind changes in a short time to every point of the compass, destroying every thing within its reach.

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445. How does the air press on our bodies? 446. What do we find is the state of the air in rising above the level of the sea? What effect has this on our bodies? 447. How is a traveller affected on a very high mountain? 448. What is said of those who live in very high countries? 449. What do we learn from this? W. 450. What is wind? 451. How is it produced? 452. What are land and sea breezes? 453. How does the air move in the Torrid Zone? 454. Where do the trade winds blow, and how are they produced? 455. What are the monsoons? 456. What are hurricanes?

In a gentle breeze, the air moves 5 miles an hour; in a storm, 50 miles; and in a hurricane, 100.

457. *Whirlwinds* are formed by opposite winds meeting and moving swiftly in a circle, raising sand and light bodies into the air.

In the deserts of Africa, they sometimes draw up the sand, as we have before seen, (¶ 298,) into a moving pillar, which buries all in its way.

458. When whirlwinds *take place on the ocean*, they draw up the water, and produce waterspouts.

459. In the deserts of Africa and Arabia, a hot wind prevails, called *the samiel* or *simoom*, which is said sometimes to produce instant death. It can be avoided only by lying on the ground.

460. In the southern countries of Europe, a warm wind blows from Africa, called *the sirocco*, which causes uneasiness and weakness.

RAIN.

461. Water continually rises in *vapor* from the land and the sea. This is called *evaporation.* When vapor is condensed (thickened) near the earth, so that it becomes visible, like steam, it forms a mist or *fog.*

462. A fog or mist rising into the air is called a *cloud;* and when it is more condensed, it becomes water or ice, and falls in rain, snow, or hail.

463. *Snow* consists of such vapors as are frozen while the particles are small. It is rarely seen in lower latitudes (or nearer the equator) than 30° in America, and 36° on the eastern continent.

464. *Hail* consists of little balls of ice, and is formed of rain-drops, frozen while they are falling. It is scarcely ever known in latitudes higher (or farther from the equator) than 60°.

465. The vapors which arise from the earth do not ascend above a certain *height;* and above this, neither rain nor snow is known. *The ordinary height of clouds* does not exceed one or two miles.

466. Various *quantities of rain* fall in different parts of the earth, according to the climate and situation. The quantity of rain and snow is greatest on *mountains*, and they contain the principal sources of rivers. *Islands, and places* near the ocean, are of course more subject to rains and moisture than the interior of a country, because there is more vapor in the air.

467. The quantity of rain also varies with the latitude. *In the Torrid Zone,* the evaporation is most abundant, on account of the heat, and the greatest quantity of rain falls on this portion of the earth. But it descends in one season of the year, and for the rest of the year there is little or no rain.

468. From this circumstance, the number of *rainy days* is smallest

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How fast does the wind move? 457. What are whirlwinds? What do they cause in deserts? 458. What in the sea? 459. What is the simoom? 460. What is the sirocco? **R.** 461. What is vapor? What is a fog? 462. A cloud? 463. What is snow? How near to the equator is snow found? 464. What is hail? 465. To what height do clouds rise, generally? 466. Where does the greatest quantity of rain fall? 467. How is the quantity in the Torrid Zone? 468. What is the proportion of rainy days?

in the Torrid Zone, and increases in proportion to the distance from the equator.

From north latitude 12° to 43°, the average number of rainy days in the year has been estimated to be 73; from 43° to 49°, 103; from 46° to 50°, 134; and from 50° to 60°, 161.

469. The *rainy season in the Torrid Zone* is during the summer, when the sun raises the greatest quantity of vapor; and of course it varies with this season on each side of the equator.

470. *Thunder-storms* are most violent in the Torrid Zone. They are unknown in regions near the poles. It never thunders in Greenland, nor in Hudson's Bay.

471. *In the Temperate Zones*, thunder-storms are more frequent and violent, in proportion as the climate is warmer.

472. There are some countries where *it scarcely ever rains;* as Egypt, Lower Peru, and Chili, and several countries of Africa and Asia. *They are watered* entirely by mountain streams, and by very heavy dews.

TEMPERATURE.

473. *Temperature* is heat or cold, and is measured in degrees by a thermometer. *On Fahrenheit's thermometer*, (which we use,) 32° is the point at which water freezes; 212° is the point at which water boils; and 96° is about the heat of our blood.

Below 45°, it seems to most persons in a temperate climate *cold;* at 60°, we call it temperate; at 70°, warm; and at 80°, hot. At 90°, it is very hot; and at 0°, or zero, it is extremely cold.

In hot climates, the people find it cold at 70°. The teeth of Africans in the West Indies chatter at 50° or 60°; and they do not feel it warm until the thermometer is above 80°; or, in some hot countries, above 90°.

474. *The mean annual temperature* is the average temperature of the air throughout the year, and shows us whether heat or cold prevails most.

475. *The mean annual temperature is greatest* near the equator, and diminishes as we go from it either North or South. *The temperature of a place depends* therefore chiefly on its latitude; but it varies also according to the situation and soil of countries, and their height above the level of the sea.

476. *When the rays of the sun fall upon the sea*, they penetrate into it, and heat all parts nearly alike according to their latitude, and the water circulates from top to bottom, and from one zone to another.

477. *Heat also causes* vapor to arise from water, and the quantity

469. When is the rainy season in the Torrid Zone? 470. Where are thunder-storms most violent? Where unknown? 471. How are they in the Temperate Zones? 472. In what countries does it seldom rain? What is the average quantity of rain in different latitudes? **T.** 473. What is temperature? How and on what is it measured? What are the freezing and boiling points, and that of blood-heat, on Fahrenheit's thermometer? What degrees are cold, temperate, warm, or hot, in temperate climates? 474. What is the mean annual temperature? 475. Where is it the greatest? On what does the temperature of a place depend? 476. What effect have the rays of the sun on the sea? 477. What does heat cause to arise from water? What effect has this when the air is hot?

of vapor is greatest over the sea. *In the hot season, or in the heat of the day*, this vapor carries off a part of the heat, and renders the sea cooler than the land. *In winter, or at night*, the vapor is condensed in fog, dew, rain or snow, and gives out a part of its heat, which renders the sea then warmer than the land.

478. Hence *the temperature of the sea* is more regular than that of the land, and the changes of temperature are less. The winters and the nights are less cold, and the summers and the days less warm, than on the land.

479. *Wet countries, or those which have a moist climate*, are warmer in winter, and cooler in summer, than those which are dry, because there is more evaporation. *Thus islands and countries near the sea*, like England, which are always moist, also have a more regular temperature than inland, or continental countries, like Russia, which are more dry.

480. The more regular and moist climate of countries near the sea, is called *a maritime climate;* and the dry, inland climate, of excessive heat and cold, is called *a continental climate.*

MARITIME is from the Latin *maritimus*, belonging to the sea.

481. *Countries covered with forests* are more sheltered from the sun and winds, and therefore more moist, than open grounds; and for the same reasons, they have cooler summers and warmer winters.

482. *Dry countries*, and especially those which are *covered with rocks and sand*, are most heated by the sun, and therefore have the hottest days and the hottest summers. *In the Torrid Zone*, dry countries are generally deserts; as in many parts of Asia and Africa.

483. But *dry and sandy countries also lose their heat* most quickly, when the sun does not shine upon them; and hence they are colder than others at night, and in winter.

Even in the Sahara of Africa, in the Torrid Zone, water is sometimes frozen at night; and in the hot climate of India, water can be made to freeze at night, by means of evaporation.

484. *A level country*, where every part is constantly exposed to the sun, is much hotter *in the day and in the summer*, than a hilly and mountainous country, where some parts are always in the shade.

485. But level countries are swept in every part by the winds; so that, in cold climates, *the nights and the winters* are more severe, and the storms often dangerous to travellers.

486. We perceive, by the snows on the mountains, (¶ 320,) that *the heat* diminishes *as we rise above the level of the sea*, as it does in going from the equator.

What effect when it is cold? 478. What is said of the temperature of the sea compared to that of the land? 479. What is the effect of a wet country or moist climate? Of islands? 480. What is a maritime climate? A continental? 481. What weather have countries covered with forests at different seasons? 482. Dry countries covered with rocks or sand? What are these last in the Torrid Zone? 483. What is said of the cooling of dry and sandy countries? 484. How is the climate of a level country, compared to a hilly or mountainous one? 485. How are the nights and winters of such countries in cold climates? 486. What is the effect on the heat as we rise above the level of the sea?

In ascending a mountain three miles high, even at the equator, we pass through every climate, and come at last to a region covered with perpetual snow, like the coldest parts of the Frigid Zones.

487. Hence *countries of different heights* differ in their temperature, even in the same zone. Some *high countries of the Torrid Zone* always have the coolness of spring; while others are never free from frost.

488. *High countries* are generally *dry* also, and have fewer *plants* and trees than lowlands. Hence they have hot *days and summers*, and very cold *nights and winters*. (¶ 482–3.)

489. *The temperature of countries also varies according to* the winds which are most common. Thus, *on the western coast of Europe*, the winds are almost constantly from the South-West, or from warm regions; and that coast is much warmer than *the eastern coast of N. America*, where the winds blow chiefly from the colder regions at the North.

490. So, also, the S-W. winds render *the western coast of N. America* much warmer than *the eastern coast of Asia*.

REGIONS OF TEMPERATURE.

491. In order to show what countries on the earth have the same average or mean temperature, lines are drawn through those places which have the same temperature, which are called *isothermal* lines, as represented on *the Isothermal Chart*.

Isothermal lines are lines of equal heat, — from the Greek *i-sos*, equal, and *ther-me*, heat.

492. *The isothermal lines divide the earth's surface*, according to temperature, into several parts, called *regions*, as represented on the Isothermal Chart. *The Equatorial Region* lies on each side of the equator, and the Hot, Warm, Temperate, Cold, Wintry, and Frozen Regions, on each side of this, towards the poles.

493. But *the seasons are not alike* in all countries of the same region, for the reasons already given. (¶ 128—129.) Thus *the winters in Northern Italy*, in the Warm Region, are as cold, on the average, as those *in Scotland*, in the Cold Region; and *the summers in Russia*, in the Cold Region, are as warm as those *in France*, in the Temperate Region, on account of the different situation of these countries.

494. *In judging of the climate of countries*, we must therefore consider their elevation, surface, soil, and situation, and the winds to which they are exposed.

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487. How are countries of different heights in the same zone? How are high countries in the Torrid Zone? 488. How are high countries as to dryness and plants? As to days and nights? 489. How else does the temperature of countries vary? How on the W. coast of Europe, compared with the E. coast of N. America? 490. Western of N. America and eastern of Asia? **R. T.** 491. What do isothermal lines show? Where are they represented? 492. How do they divide the zones? Where is the Equatorial Region? What regions on each side of this, and in what order? 493. What can you say of the seasons of different countries? Give some examples. 494. How can we judge of the climate of countries?

PLANTS.

495. There is an immense variety in *the plants of the earth.* Very few plants will grow in all countries; but nearly every portion is supplied with some, which support men and animals.

Some belong to mountains, and others to lowlands; some to water, others to moist regions, and others to rocks and sand; while some grow only in caverns and mines, on the bed of the sea, or in the snow.

496. *The most important plants* are those which are used for food, by men and the inferior animals, as the grasses, grains, fruits, and roots; and almost every climate and country has some of these which are suited to it.

497. *Other plants* — such as hemp, flax, and cotton — *supply us with materials for clothing;* and plants of this sort *are found* in all parts of the world, except the Frigid Zone, where men find it necessary to clothe themselves with furs.

498. *Plants of another class* — such as indigo and logwood — furnish us with colors for dyeing and staining; and *the trees of the forest* supply us with pine, oak, mahogany, and other kinds of wood, for buildings, for furniture, and fuel.

499. Even most of *those plants which are poisonous,* (or which produce disease when taken in large quantities) are found useful, in small quantities, as medicines for the sick.

500. A small number of *plants are found only in their native country, like* the Peruvian bark tree in S. America; but the seeds of *most of those that are useful* have been scattered, by the winds and waters, or by commerce, into all countries which have a climate and soil suited to them.

501. *The geographical situation of plants* depends therefore chiefly on the climate and soil of countries; and they may be described with the regions in which they are found.

502. *Plants are most abundant* in the warmest parts of the earth. One half of those which are known belong to *the Torrid Zone;* and a large part of these belong to *America.* Of more than 100,000 plants now known, *the Frigid Zones* have only a few hundreds.

CLIMATES AND PRODUCTIONS.

503. *The continents are divided, by the isothermal lines,* according to the climate, into *regions,* each of which includes those countries

P. 495. What can you say of the plants of the earth? 496. What are the most important plants? 497. Mention some others, and their uses. Are such plants found in all parts of the world? How are the inhabitants of the Frigid Zone clothed? 498. What other class of plants? Of what use are the forest trees? 499. What can you say of the poisonous plants? 500. Are any plants found only in their native country? What is said of the most useful kinds in this respect? 501. On what does the geographical situation of plants depend? How may they be described? 502. Where are plants most abundant? How many are found in the Torrid Zone? Where do most of these belong? How many plants now known? What proportion belong to the Frigid Zones?

whose climate and plants are nearly the same. *The lines are marked* on the Isothermal Chart, *and the names of the countries* may be learned from other maps, or the Moral and Political Chart.

504. *The limit or boundary of a plant*, means that line beyond which it will not grow. On the middle of the chart are the names of the most important plants, which are found on both continents. The lines running from each show to what regions they extend. On the continents, are the names of plants which are peculiar to each.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

503. How are the continents divided by the isothermal lines? Point to the eastern continent. The western. Which is S. America? N. America? Africa? Europe? Asia? Point to the U. States. Mexico. Canada. The countries of S. America. Europe. Asia. Africa.

Through what countries does the equator pass? What part of the eastern continent lies North of it? What of the western? What parts of each lie S. of the equator? What other lines are drawn on the Chart?

504. What is meant by the limit of a plant? What is said in the note at the top of the chart? Examine the lines, and mention the most important plants which grow near the equator. How far North and South do pepper and other spices grow? How far do the pine-apple and other delicate fruits grow? Of what plants are those isothermal lines the limits, which are drawn next to the equator, on each side? How is the region which lies between these lines named on the chart? How is it colored?

EQUATORIAL REGION.

505. *The Equatorial, or Torrid Region*, occupies the greater part of the Torrid Zone. It is the only part of the earth which is sufficiently hot to produce the finest spices, and the most fragrant gums, such as myrrh and incense. *It also produces* the finest fruits, the most beautiful plants and flowers, and the largest and loftiest trees.

506. The trees which bear the plantain, the banana, and the bread fruit, and the palm-tree, which yields the sap of which sago is made, supply *a large part of the food of the inhabitants* of this region. *These products, with the roots* of the yam, the cassava, and the arrow-plant, and rice, maize, and millet, are chiefly used instead of bread.

507. *In the level countries of this region*, frost and snow are unknown, and the trees are covered with perpetual verdure. During some parts of the year, *the climate* is the most delightful on earth. At other seasons, the heat is distressing, and water is often scarce.

In the highlands of this region, which are 8,000 feet above the level of the sea, we find a temperate climate, and the grain and other productions of the Temperate Regions. (*See* ¶ 486.)

508. The Equatorial Region has generally two *seasons;* the wet season, when the rains are constant; and the dry, when rain seldom falls. Some places have two of each in a year.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

How far North and South of the equator does the Equatorial Region extend? What countries of America does it contain? What of Africa? Of Asia? Is any part of Europe in this region? 505. What can you say of the Equatorial Region? What does it produce? 506. What trees

furnish food to the inhabitants? What is used in place of bread? 507. In what zone is this region? What climate has it? 508. What seasons? What spices do you find in this region, which grow on both continents? What in Asia only? What fruits do you find? What kinds of grain? Does wheat grow in this region? (*See the note at the top of the chart, and* ¶ 507.) What peculiar productions, in this region, in South America?

Which of the plants of the Equatorial Region grow in other regions? How far North do the sugar-cane and coffee grow? What line of temperature is there here? What region lies between the limit of spices and that of the sugar-cane? How is it colored?

HOT REGIONS.

509. *The Hot Regions* have nearly the same climate with the Equatorial Region; but they will not *produce* the finest spices and fruits, and the trees are stripped of their leaves for a few months, in the northern parts. *These regions terminate* where snow falls upon the plains, and where the sugar-cane ceases to grow.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

509. What can you say of the Hot Regions? Where do they terminate? What countries of North America are in the Northern Hot Region? What of Africa? What of Europe? Of Asia? Do these countries have any snow on the plains? What are the most important plants, put down as belonging to these countries? What grains grow here, that do not grow in the Equatorial Regions? Does wheat extend into the Hot and Equatorial regions? (*See the note at the top of the chart.*) What countries do you find in this region South of the equator? What peculiar productions in S. America? What in China?

To what line of temperature do rice and cotton flourish? What is the region called, between the limits of coffee and cotton?

WARM REGIONS.

510. *In the Warm Regions, the climate* is mild, and the winters are rather damp than cold. Snow is rare, and the waters are seldom frozen. The summers are very dry; and the heat is then constant and oppressive.

This region produces some of the more delicate fruits, as the olive, fig, orange, &c.; and plants grow the greater part of the year.

511. Rice, maize, and in some countries wheat, are the principal *bread stuffs*. *Pastures* are generally scorched by the heat; and it is only on the mountains or the marshes, that they are rich and abundant.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

How is the Northern Warm Region colored on the chart? What part of North America is in it? What countries in Europe? Of Asia? Of Africa? Of S. America? 510. What is the climate of the countries in the Warm Regions? What can you say of the winter? Of the summer? How long do plants grow? What plants of the Hot Regions grow here? What grain and fruits, which do not flourish nearer the equator? 511. What are used as bread? What can you say of the pastures? What garden vegetables? What trees? What peculiar tree in Spain, and how far South does it extend? What in China and Japan? Does the wine grape grow in this region on the eastern continent?

PLANTS OF WARM COUNTRIES.

Rice.

Cotton.

Tobacco.

Sugar-Cane.

Coffee.

Cocoa-Nut.

Palm-Tree.

Clove.

Pimento or Allspice

Bread-Fruit

Banana.

Tamarind.

(*The wine grape flourishes best in this region in Europe, but it has not yet been found to flourish so well in the United States.*)

What name is given to the region between the limit of cotton and that of the wine grape? How is it colored on the chart?

TEMPERATE REGIONS.

512. *The Temperate Regions* have a temperate climate through the greater part of the year. Here we first find the regular succession of *seasons*, — spring, summer, autumn, and winter, — and an equal proportion of cold and heat.

These regions produce the most nourishing kinds of grain, as wheat, rye, &c., in perfection, and most kinds of useful vegetables and fruits in abundance.

513. In the Temperate and Cold Regions, we find the beautiful fields of *grass*, and the rich *verdure* in summer, which are scarcely seen in the hot season, in the warmer regions.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

What parts of N. America lie in the Temperate Region? What countries of Europe? Of Asia? 512. Describe the general climate of the countries in the Temperate Region. The seasons. The productions. Do they produce all the plants of the Warm Regions? What kind of grain? What fruits and trees are the principal? What peculiar tree in N. America, in place of the sugar-cane? Does the wine grape grow farther from the equator? What part of S. America is in this region? 513. What can you say of the grass and verdure?

COLD REGIONS.

514. The *Cold Regions* lie next to the Temperate. The winters are long and severely cold. The change from winter to summer is sudden, and the summer is often very hot. They do not *produce* the wine grape, or the peach, and wheat is raised with difficulty; but the pastures are rich, and rye, oats, and barley, can be cultivated.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

514. What region lies next to the N. Temperate? How is it colored? What line of temperature bounds it on the north? What parts of North America are in it? What of Europe? Of Asia? Which are the most northern countries in it? What is the climate? What are the seasons? The chief productions? The principal fruits? What grains? What trees? What country S. of the equator is in the Southern Cold Region? What grain or corn does not grow beyond the limits of this region? What trees and fruits? What vegetables? What is the region beyond this line called? How is it colored?

WINTRY REGIONS.

515. *The Wintry Region* is severely cold during the greater part of the year. The summer is very short, and the heat often intense during the day, which is sixteen hours long.

It produces no grain but rye, barley, and oats. The oak will not grow here; and the forests are chiefly composed of evergreens, such as the pine and the fir.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

To what line of temperature does the Northern Wintry Region extend? What countries are in this region? 515. What is the climate? What grain does it produce? What trees? What fruits?

FROZEN REGIONS.

516. *In the Northern Frozen Region*, which is the only one inhabited, there are but two seasons; a long winter of extreme cold, and a short summer of great heat, (on account of the length of the days,) without spring or autumn. Ice continues through the year.

Vegetation is scanty, and chiefly confined to the South side of the hills; and it is generally impossible to cultivate the earth. Moss is the food of the cattle; and berries almost the only vegetable for the use of man.

QUESTIONS AND EXERCISES ON THE ISOTHERMAL CHART.

Where is the Northern Frozen Region? What parts of N. America are in it? What parts of Europe and Asia? 516. What seasons has this region? What can you say of the vegetation? What plants do you find in it on the chart?

(III.) CROSS QUESTIONS.

In what region and country is the matté, a plant resembling tea, found? In what region do we find the tea plant? Cloves, cinnamon, and nutmegs? The sugar-maple? The Peruvian bark? The cork-oak? The cocoa-nut? The Indian-rubber, or gum elastic tree?

In which region will wheat grow? Sugar-cane? Apples? Rye? Indian corn? Rice? Cotton? Tobacco? Wine grape? Flax? Oak? Pear? Plum and cherry? Oats? Barley? Coffee? Potato? Turnip? Yam, cocoa-nut, and tamarind? Orange, lemon, fig, olive, and almond? Pine-apple, banana, &c.? Pine, fir, and willow? Pepper, spices, gums, &c.? Mahogany, dye-woods, and precious gum trees? Where does the palm tree flourish? Iron wood? In how many regions will currants and berries thrive? Cedar? Willow? Fir?

Which region contains the greatest variety of plants? Which the least variety? What parts of the Equatorial and Hot Regions have the climate of the Temperate Regions? (¶ 486.) Do their productions resemble those of the Temperate Regions?

ANIMALS.

517. *The animals of the earth may be divided* into two great classes, the tame or domestic, and wild animals.

518. *Domestic animals* are chiefly used for food, or as beasts of burden and draft. Some wild animals are important to man for food; and many, on account of their fur, skin, down, or oil. Others are dangerous to man, as beasts of prey, serpents, &c.; and others still very troublesome, as many small animals and insects.

519. By the kindness of Providence, the most useful *domestic animals, the horse, the ox, the cow, the sheep, the cat*, and *the dog*, are found in all latitudes, as far as the Frozen Regions.

517. Are the animals of the earth the same in all zones? How may they be divided? 518. How is each kind useful to us? 519. Where are the most useful domestic animals found?

520. Among *wild animals, the goat, the deer, the rabbit, the squirrel, the rat, the mouse, the bear*, and *the wolf*, are found in all latitudes, and in almost all countries where man can live.

521. *Most other animals* are distributed in various countries, according to the climate, the soil, and the productions on which they feed. They are not usually confined, like plants, to a particular region; but the same classes are generally found throughout a whole zone.

On the Chart of Climates are delineated the most remarkable animals, arranged according to zones, and not according to regions, with some which are peculiar to particular countries. Those above mentioned, which are found universally, are generally omitted.

The engravings on the opposite page represent the principal animals of the earth, in their proportionate size, as follows: 1. Elephant; 2. Rhinoceros; 3. Hippopotamus; 4. Camelopard or Giraffe; 5. Horse; 6. Lion; 7. Tiger; 8. Deer; 9. Sheep; 10. Llama; 11. Antelope; 12. Wolf; 13. Dog; 14. Hyena; 15. Fox; 16. Cat; 17. Rabbit; 18. Mouse.

EXERCISES ON THE ISOTHERMAL CHART.

What regions lie nearest the equator? In what zone are they? What regions between the limit of the Tropical and the Frozen Regions? In what zone are they? What is the climate of the countries nearest the equator? (¶ 507.) What of those within the limits of the Frozen Region? (¶ 516.) Are the countries which lie between extremely hot, or extremely cold? (¶ 512.) In what zone do these countries lie?

TORRID ZONE.

522. The *Equatorial and Hot Regions*, lying chiefly in the Torrid Zone, abound with animals; and we find here the largest and most beautiful, as well as the fiercest and most dangerous.

523. The Torrid Zone is distinguished for the huge *size* of some of its animals. *The elephant, the hippopotamus, and the camelopard*, are from 10 to 15 feet in height. The great *boa serpent, or anaconda*, is sometimes 30 feet in length. *The ostrich, the cassowary, and the condor*, are birds as large and as strong as many quadrupeds.

524. Here also we find the most *beautiful animals*. *The antelope, the leopard, the zebra*, and other animals of this zone, are remarkable for the beauty of their forms and motions. The numerous birds are adorned with the richest plumage; and the feathers of *the ostrich and the bird of paradise* are used as the ornaments of kings and queens.

525. It is only in these regions that we find the most ferocious of the *beasts of prey — the lion, the tiger, the leopard, and the hyena*, of the Eastern Continent; and *the puma or cougar, and jaguar* — the lion and tiger of America.

526. *Serpents and reptiles* are, in this zone, most numerous and poisonous. *The anaconda* crushes large animals by winding himself around them. *The asp and the viper* are peculiarly poisonous; and the venomous *scorpion* is often found in the houses and beds of the inhabitants.

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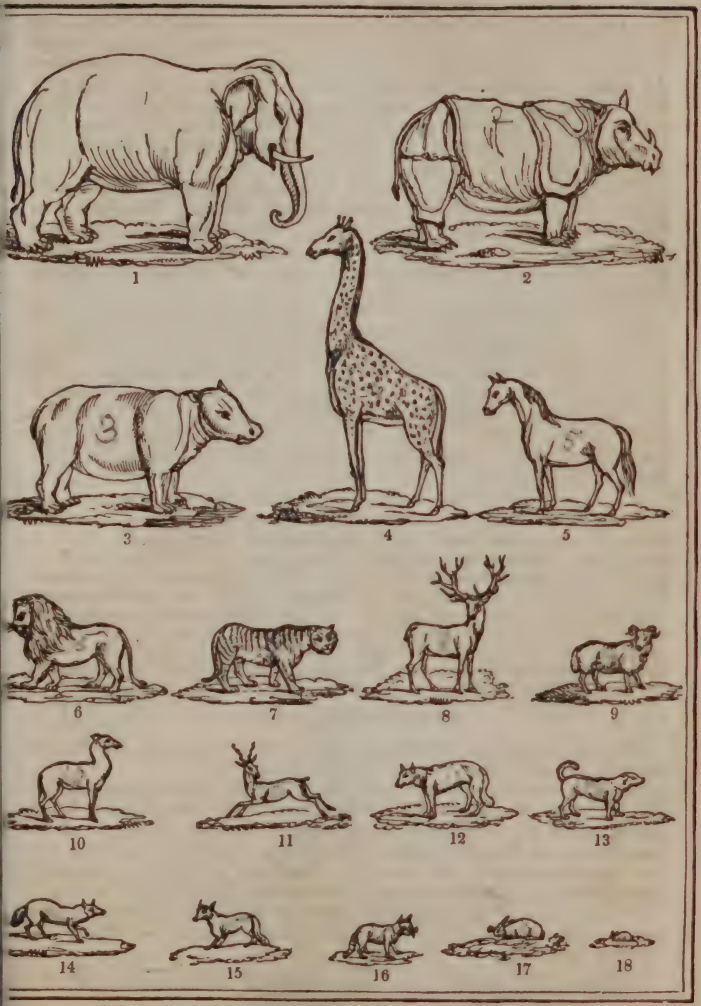
520. What wild animals are found in all latitudes? 521. How are most other animals distributed? 522. What can you say of the Equatorial and Hot Regions? 523. What is the size of animals in the Torrid Zone? 524. Are there any beautiful animals there? 525. What can you say of the beasts of prey? 526. What can you say of the serpents and reptiles?



(78) *Comparative size of the principal Quadrupeds of the Earth.*

527. The air of these regions is frequently so clouded with *insects*, that the traveller swallows them with his food. Many of these sting in a painful manner; and the *locusts* and *flies* often assemble in such numbers, as to devour the grain and vegetables of whole countries. At night, the forests are illuminated with *fire flies;* and by day, they are enlivened by the various tribes of *monkeys* peculiar to these regions. *The orang-outang*, which resembles man in his appearance, is only found in a few of the islands of the Indian Archipelago, or Malaysia, and in some parts of Africa.

528. The tropical seas abound with *fish* of the most beautiful colors. *The flying fish* here skims through the air. *The shark* is as ferocious as a beast of prey. The *shell fish* are larger and finer than in the colder regions; and it is here chiefly, on the coasts of India and America, that *the pearl oyster* is found, from which the pearl is obtained.

529. The horse, the ass, the mule, and the ox, are found in these regions; but *the principal beasts of burden, on the Eastern Continent*, are the elephant and the camel. *The elephant* is much valued for its docility and strength, and is often used in hunting and war. *The camel* is provided with a distinct stomach, to contain water; and is the only animal which can carry burdens over the deserts of Africa and Arabia. In S. America, *the llama and the vicuna* are small animals, peculiarly fitted to carry burdens over the rugged mountain roads of that country.

EXERCISES ON THE ISOTHERMAL CHART.

Examine the Chart of Climates, and mention the five largest animals found in Africa and Asia. In what regions are they found? What is their size? What large serpent? What large bird? What beasts of prey in the Equatorial and Hot Regions? What other animals do you find? Which are among the most beautiful of these? (*The ibis and the ichneumon were worshipped by the Egyptians. The ichneumon is a reptile very useful in destroying the eggs of the crocodile.*) What are the largest animals in S. America, in this region? What is the largest bird? What beasts of prey are there here? What beasts of burden? What animals are found wild in herds?

TEMPERATE ZONE.

530. In going from the Torrid Zone *towards the poles, we find the animals* smaller, less numerous, and less ferocious.

No land animal, now living in the North of the tropic, is as large as the elephant. *The wolf, the bear, the panther, and the catamount, or cougar* of N. America, are the principal beasts of prey; and *the grisly bear* of Missouri is the only one that resembles the lion and the tiger in strength and ferocity. *The lynx*, a small and beautiful beast of prey, is sometimes taught to hunt the deer, as in S. Africa.

The skeleton of the *mammoth*, found in the United States, proves that animals much larger than the elephant formerly existed in this zone, in America.

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527. Of the insects? 528. Of the fish? 529. What are the principal beasts of burden? What in S. America? **T. Z.** 530. How do we find the animals, in going towards the pole? Is there any animal as large as the elephant? What beasts of prey are there?

531. *Reptiles and serpents* also gradually diminish in numoer and venom, as we go towards the poles, until they disappear entirely in the Frozen Regions.

532. *In the Warm Regions, the insects* are also very troublesome. In countries nearer the poles, they are killed by the frosts of winter; but even there, they are very troublesome in the hottest season, and in marshy regions.

533. *The birds of the Temperate Zone* are inferior in size and beauty to those of the Torrid Zone; but they sing more sweetly.

534. *The horse and the ox* come to their perfection, and are the most useful beasts of burden, in the Temperate and Cold Regions; and *the ass and the mule* in the Warm Regions. *The camel* is used in some countries. *At the limits of the Frozen Regions*, these animals either cannot endure the cold, or do not find sufficient grass and grain for food; and *the reindeer*, which lives on moss, and *the dog*, which feeds on fish, take their place.

In South Africa, *the buffalo* is used for riding and drawing carriages, like a horse. In Tibet, there is a peculiar species of the buffalo, called *the yak, or grunting ox*.

535. In those regions where the winters are severe, *we first find the beaver, the otter*, and other animals, whose warm furs are useful to defend us from the cold.

In Norway and Sweden, *the lemings, or Norway rats*, travel in large bodies in search of food. *The glutton* is a lazy animal, which often drops from a tree upon a deer, and devours his flesh as he runs.

EXERCISES ON THE ISOTHERMAL CHART.

What beasts of burden do you find on the Chart of Climates, in the Temperate Zone in Europe and Asia? What beasts of prey? Which is the most fierce? What furred animals? What others? What wild animals in herds? Do you find the monkey here? In what country do you find the camel? What beasts of prey in the Temperate Zone, in America? What furred animals? What wild animals in herds? Which animal appears to be the largest? Are there many poisonous reptiles and serpents in this region? What can you say of the insects? How are the birds? What beasts of burden are used in the various regions of the Temperate Zone?

OCEANICA.

536. *The animals of New Holland* are unlike those found in other parts of the world. *The swans* are black, while those of other parts of the world are white. *The kangaroo* leaps on its hind legs like a bird. One species of *the opossum* flies from tree to tree; and *another quadruped* has a bill like a duck.

537. *In the islands of the Pacific Ocean*, the dog and the hog are almost the only animals. Both are used for food.

FROZEN REGIONS.

538. *In the Frozen Regions*, we find so few *plants*, that the animals

531. What can you say of reptiles and serpents? 532. Of insects? 533. Of birds? 534. Of beasts of burden? 535. What furred animals are there? **O.** 536. What can you say of the animals of New Holland? 537. Of the islands of the Pacific Ocean? **F. R.** 538. How are plants in the frozen regions?

of more temperate climates cannot subsist there. But we find *the reindeer the sable, the ermine*, protected from the cold by a rich covering of fur, which is here an important comfort and luxury to man. *In approaching nearer the pole*, both animal and vegetable life seem almost extinct. The fierce *white bear* roams undisturbed over these regions of frost, and frequently passes from one country to another on the floating ice. *The polar fox* advances still farther North.

539. But *the ocean*, from its milder temperature, supports vast numbers of animals. The polar seas swarm with *herring and other small fish*, which are of the utmost value to the inhabitants of these barren regions. *Codfish* are chiefly obtained on the coast of Newfoundland; and *herring* on the western coast of Europe.

540. The Polar seas also abound with *seals and sea otters*. The great *walrus, or sea-horse*, is found in herds upon the ice; and *the whale*, the monarch of the ocean, makes this his chosen resort. The seal, the walrus, and the whale, are all covered with a thick coat of fat, which protects them from the cold; and thus they furnish oil, which serves the natives of those dark and frozen regions for light, and fuel, and food. The fur of the seal is also valuable, and the seal fisheries (carried on chiefly for the skins) employ great numbers of ships in the Greenland Seas, around Cape Horn, and also on the north-west coast of America.

541. *The birds of these regions* assume a softer covering, and the down of *the eider-duck*, and other birds, is an important article of commerce. *On some of the islands* of these seas, the wild fowl and their eggs are the chief support of the inhabitants.

542. *In the Northern Wintry and Frozen Regions*, the ordinary *beasts of burden* of the Temperate Zone become small and stunted, or fail entirely, for want of food. The reindeer and the dog are used in their stead.

543. *The reindeer*, of all known quadrupeds, has its range nearest to the pole. Within these limits only, it finds the moss adapted for its food. This animal not only serves as a beast of burden, but supplies the natives of these northern regions with most of their food from its milk and flesh; while the skin furnishes much of their clothing, and the sinews their thread.

EXERCISES ON THE ISOTHERMAL CHART.

Look on the Isothermal Chart, and mention what vegetables you find in the Frozen Regions. What is the climate? Can animals which feed on grass and grain live here in great numbers? What beasts of burden do you find in this region in Europe and Asia? (*In America the dog is chiefly used.*) What beasts of prey are there here? Which is the largest? What other animals? What are those numbered 5, 6, and 8, which are also found here? What are the uses of these animals? What animals are delineated on the ocean? (*The whale lives wholly in the ocean. The walrus and the seal live partly in the ocean, and partly on the land.*) What are the uses of these animals? What can you say of the birds in this region? What of the reindeer?

What land animals are found here? What do we find nearer the pole? 539. What fish do we find in the ocean? 540. What other animals? What valuable products do they furnish? 541. What can you say of the birds of these regions? 542. What beasts of burden do we find in these regions? 543. What can you say of the reindeer?

III.* CIVIL GEOGRAPHY.

MAN.

544. *In natural history, man* is placed at the head of the animal creation, and *surpasses them all* by his erect position, the perfection of his body, and the power of speech.

545. *Most animals are confined* to one climate, and to one kind of food and life. *Man is made capable of enduring* all climates, *of living* on every kind of food, *and performing* every kind of labor.

546. But *man is superior especially*, in having reason and conscience, and a soul which will live forever. He is thus enabled to govern all other animals, to provide for his own wants, and to know and serve his Creator.

547. *Men differ* in their form and color, like inferior animals of one and the same race. *They differ still more* in their language, religion, customs, knowledge, and state of civilization.

RACES OF MEN.

(79) *Races of Men.*

1 *European.* 2 *African.* 3 *Asiatic.* 4 *American.* 5 *Oceanic.*

548. There are *five principal races of men*, differing from each other in color and form. They are called — *the European, the Asiatic, the African,*

C. G. 544. What place does man hold in natural history? How does he surpass the animal creation? 545. What can you say of most animals? Of what is man made capable? 546. How is man especially superior to animals? 547. How do men differ in form and color? In what respects do they differ still more? **R. M.** 548. How do the five principal races of men differ from each other? Name the races.

* Civil Geography is designed for the third course of study.

the Oceanic, and the American races, from the grand divisions of the earth which they chiefly inhabit.

549. *The European or Caucasian race are distinguished* by an oval or round head, oval face, long and often light hair, and, generally, by a light complexion, and regular forms and features. The Arabs, and some other nations of this race, have dark complexions.

550. *The Asiatic or Mongolian race* have a yellow or brown color, straight, coarse, black hair, small eyes set obliquely, a broad nose, and flat face.

551. *The African race* are generally black, with short, woolly hair, flat noses, and thick lips.

552. *The Oceanic or Malay race* resemble the Asiatic race; but are of a deeper color. *Some tribes in Australia* are more like the African race; but most of them have better forms and features than either of these races.

553. *The American or Indian race* are of a reddish brown or copper color, with straight black hair, and high cheek bones; and often have better forms and features than any except the European race.

554. But *the appearance of men of the same race* is often very different. We find *people of the Oceanic, American, and Asiatic races,* who resemble Europeans; and sometimes even Africans have the same form and features. We also find *some Europeans* who have the appearance of the other races.

555. *The Scriptures inform us,* that all these races are children of the same first parents, and brethren of the same family. *The difference between them has been produced,* like that we see in the race of horses, dogs, and many other animals, in part by the difference of climate, and in part in other ways which are now unknown to us.

556. *More than three fourths of the inhabitants* of the world are of *the European and Asiatic races,* which are nearly equal in number. *The African race* is next to these in number; and *the American race* is less numerous than the Oceanic.

557. *The American race are found only in America,* and have never left that continent. *The Malay race inhabit* Malacca, and the islands scattered through the Indian and Pacific Oceans, from Madagascar to the coasts of America; and are therefore entitled to the name of the Oceanic race.

558. The Eastern continent is divided between *the three remaining races. The Asiatic race* occupy the north-eastern part of the continent, from

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From what do they derive their names? 549. By what are the European race distinguished? 550. The Asiatic race? 551. The African race? 552. What can you say of the Malay race? Of some in Australia? 553. The American or Indian race? 554. What is said of the appearance of the same race? Give some examples. 555. What do the Scriptures inform us respecting these races? How has the difference between them been produced? 556. How many inhabitants of the world does the European race comprise? The Asiatic? The African? The American? Give the probable number of each race. 557. Where do we find the American race? The Oceanic or Malay? What may these be called? 558. Where are the three remaining races? What part of the Eastern Continent does the Asiatic race occupy?

Malacca and the Gulf of Siam to the Caspian and White Seas; and *the African* race inhabit the south-western part, comprising the southern and middle portions of Africa.

559. *The European race* occupy the belt between these divisions, extending from the Bay of Bengal, over South-Western Asia, Northern Africa, and all Europe except the north-eastern corner. There, we find a small number of Laplanders, Samoiedes, and other tribes, who appear to belong to the Asiatic race.

560. *The European race have also gone in colonies* to other parts of the world, and *now inhabit* the greater part of America, and extensive countries in Africa and Oceanica.

NATIONS AND LANGUAGES.

561. *The races of men are divided* into families and nations, distinguished by their languages.

562. *The European race* forms one great family, comprising many nations, whose languages seem to have been formed from one primitive language. *It includes* the Hindoos, Persians, Arabians, and Europeans; and *is called* the Indo-European family.

In Europe itself, the chief branches of this family are the *Greek or Latin branch*, comprising the Greeks, Italians, Spaniards, Portuguese, and French, whose languages all resemble the Latin; the *German or Teutonic branch*, comprising the Germans, Hollanders, English, Danes, Norwegians, and Swedes; and the *Sclavonic branch*, comprising the Russians, and most other nations of Eastern Europe.

563. *The Asiatic race* comprises the Chinese and Tartar families. *The Chinese family* embraces the Chinese, Japanese, and some neighboring nations, and contains one quarter of the inhabitants of the globe.

564. *The Tartar family* embraces the Tibetans, Mongolians, Mandshurians, Tartars, Turks, and a part of the Siberians.

565. *The languages of almost all these nations* are written, and many of them printed; so that they can be studied and understood by other reading nations. The same *European letters are also understood* by one half, and *the Chinese characters* by one quarter, of the inhabitants of the world.

566. *The African, Oceanic, and American races are divided* into numerous families, with a great diversity of languages. *Most of their languages* have been written only within a short period, by the efforts of

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The African? 559. The European? What portion of the Asiatic race do we find in Europe? 560. Where have the European race gone in colonies? What part of the world do they inhabit? **N. L.** 561. How are the races of men divided? 562. What can you say of the European race in this respect? What nations does this family include? What is it called? 563. What families does the Asiatic race comprise? What can you say of the Chinese family? How large a part of the population of the globe does it contain? 564. The Tartar family? 565. What can you say of the languages of almost all these nations? By how large a portion of mankind are the European letters understood? The Chinese characters? 566. What can you say of the African, Oceanic, and American races? Of most of their languages?

Christian missionaries, and we know very little of them; but many are not yet reduced to writing.

RELIGIONS.

567. *True religion* is worship and obedience to the true God, revealed in the Scriptures. But *the word religion is used in Geography* to signify the reverence and worship paid by men to any thing which they believe to be more powerful than man.

568. *Almost all nations of the earth* have some kind of religion; but *where the Scriptures are unknown*, it is always corrupt; and in many tribes, almost every man has his own god, and his own mode of worship.

569. *Revelation was first given* to the Jews in the Old Testament, in which the Messiah was foretold. *The Jews* are still a separate people, scattered among all nations, *who believe* in the Old Testament only, and expect a Messiah yet to come.

570. *Christians* are those who believe in Jesus Christ as the Messiah, and in the New Testament, as well as the Old.

The Christian religion requires not only love and obedience to the true God, but justice and kindness to all, and especially to the weak, the poor, and the stranger; and *forbids* all cruelty and revenge.

571. There are *three great divisions of Christians;* Roman Catholics, Greeks, and Protestants. *Each division* has peculiar doctrines and modes of worship.

572. *Protestants are divided* into various sects. The principal sects which differ in external forms are Lutherans, Reformed, Episcopalians, Presbyterians, Congregationalists, Baptists, Methodists, and Friends or Quakers.

Christian countries are distinguished upon the Chart of the World, in the Atlas belonging to this work, by a cross.

573. *Mahometans* are those who believe in Mahomet, an impostor, in Arabia, who lived 600 years after Christ, and pretended to be inspired.

574. *He forbade* idolatry, and the worship of many gods; but *he allowed* his followers to kill and persecute those of other religions, and to practise other crimes.

Mahometan countries are distinguished on the Chart by a crescent, the standard of Mahomet.

575. *Pagans* are those who believe in false gods; and, in different nations, worship the sun, stars, rivers, idols, or even beasts and insects.

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567. What is true religion? How is the word religion used in Geography? 568. What can you say of almost all nations of the earth as to religion? What is the state of religion where the Scriptures are unknown? 569. To whom was revelation first given? Who are the Jews? What do they believe? 570. What are Christians? What does the Christian religion require? What does it forbid? 571. What three great divisions of Christians? What can you say of each division? 572. How are Protestants divided? Mention the principal sects. 573. What are Mahometans? 574. What did Mahomet forbid? What did he allow? 575. What are Pagans?

576. *Most Pagans think it right to treat the feeble*, the poor, and the sick, with unkindness. They often *torture themselves*, destroy their children, and practise other cruel and wicked rites, to please their gods, and obtain the forgiveness of their sins.

Pagan countries are distinguished on the Chart of the World by the picture of an altar.

LAWS AND CUSTOMS.

577. *The laws and customs of nations* are very different, and depend much on their religion, and the state of knowledge and commerce.

578. *Most Pagan nations are not required by their religion* to treat their fellow-men with kindness. Hence *they often treat with cruelty* the feeble and the aged, women and children, and others who cannot protect themselves.

Among Pagans, it is common to leave a person to drown or perish without trying to assist him; and the Tartars, and many savage nations, are accustomed to leave the sick, the deformed, and the aged, — even their own parents and children, — to perish in solitary places.

579. *Mahometans and Pagans generally think it right* to injure or kill any person of another religion; and those taken in war are made slaves, or cruelly treated. In most of these nations, also, it is considered right for a man to *revenge* himself on those who have injured him or his friends.

580. *The Pagan and Mahometan religions also teach that women* are unfit to be the equals and companions of men, and allow them to be used as slaves. Hence, *among wandering nations, women* are generally obliged to carry the burdens, and perform the most severe labors, while the men are idle.

581. *Among settled nations which are Pagan or Mahometan, women* are bought and sold, and regarded as slaves, only fit for the service or amusement of their masters. They are often treated with great cruelty. It is only *in Tibet*, and a few of the Asiatic islands, that they are treated with respect and kindness.

582. *The Christian religion requires* men to be kind and benevolent to all, of every nation; and among Christians, even enemies taken in war are treated with kindness. *Laws and customs are most just and kind* in countries where Christianity is best understood and obeyed.

583. *The Christian religion alone recognizes women* as the companions

576. How do most Pagans treat the feeble, poor, and sick? What other practices of theirs can you mention? **L. C.** 577. What can you say of the laws and customs of nations? 578. What do most Pagan religions teach as to kindness to fellow-men? Whom do they generally treat with cruelty? 579. What opinions of Mahometans and Pagans are mentioned? What is said of the ideas of revenge among Mahometans and Pagans? 580. What do these religions teach respecting women? How are women treated among wandering nations? 581. Among settled Pagan and Mahometan nations? What countries are exceptions? 582. What does the Christian religion require? How are enemies to be treated? Where are the laws and customs most just and kind? 583. How does the Christian religion regard women?

of men; and in Christian countries we find them treated as such. It is only in the most enlightened Christian countries, that *they are well educated.*

584. *Some nations, where Christianity is corrupted,* forget or neglect many of these duties. *In Abyssinia,* and some other countries which were once Christian, but now have little more than the name, the people have imitated the cruel customs and laws of the unchristian nations around them.

585. On the other hand, *some of the hunting and other Pagan tribes, who have become Christians,* like the Greenlanders, the Esquimaux, and the islanders of the Pacific Ocean, have laid aside their bad laws and customs, and become kind and peaceful.

586. *In countries which have a great deal of commerce with enlightened Christian nations,* the people are often led, by imitation or shame, to change their cruel customs and laws. In this way, *commerce may be* useful in improving the state of society, even where there is no change of religion.

KNOWLEDGE.

587. *Knowledge refers* either to the things around us, or to those we have never seen. *Our knowledge of things around us* depends upon the right use of our senses, or our care and skill in observing; and *those who have no books* often have most knowledge of this kind.

588. But *our knowledge of things in other countries,* or in the time before we were born, must be obtained from the information of others, either in conversation or in books. Hence *those persons* and *nations generally possess most knowledge* who are most acquainted with men of other countries, and with books.

589. *In nations where there are no books, knowledge is preserved* only by tradition, that is, by being told from father to son. Among the North American Indians, and Tartars, they often have public meetings, in which the knowledge and history of the tribe are communicated to the young.

590. But *in this way* many things are forgotten, many are related incorrectly; and these nations have no correct knowledge, except of things which they see or hear.

591. *By means of books,* the knowledge of our forefathers has been preserved; every new discovery is added to this stock; and a person in one

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In what countries are they well educated? 584. What can you say of nations where Christianity is corrupted? What example can you give? 585. What is said of the hunting and other Pagan tribes that have become Christians? 586. What can you say of countries which have much commerce with enlightened Christian nations? What good may commerce do in this respect? K. 587. To what does knowledge refer? On what does our knowledge of things around us depend? Who often have most knowledge of this kind? 588. How do we obtain our knowledge of things in other countries? What persons and nations, then, generally possess the most knowledge? 589. How is knowledge preserved in nations where there are no books? Give examples. 590. Does this give correct knowledge? 591. What is the use of books?

country may become acquainted with what is known in all other countries where books are made.

592. In this way, so much *is collected on all the branches of knowledge*, that they can be formed into sciences, such as Astronomy, Philosophy, Mathematics, and Natural History; and we can learn the reasons of things, as well as the facts.

593. *Hence we find, that those nations that have no written language, or books*, are ignorant of the sciences which are taught in our schools. Many of them cannot even *count* beyond ten, and know scarcely any thing of other countries.

594. *Some nations who have a written language* are not acquainted with the art of printing. *All their books are* manuscripts, (or written by hand,) which require a great deal of time to copy; and therefore they are so scarce and expensive, that few can obtain them.

595. *Some of these nations*, like the ancient Greeks, and the Arabs, and Hindoos, are acquainted with some of the sciences; but their knowledge is imperfect. *They believe* many falsehoods; and they *are ignorant of* many important truths which are known to the children of our schools, such as the form and motion of the earth.

The Hindoos have had manuscript books for ages; but their religious books teach them that the earth is flat, and rests on the back of a turtle.

596. *In countries where the art of printing is known*, books are easily and cheaply made, in large numbers, and every kind of knowledge can be obtained by those who can read.

597. *If such countries carry on commerce freely* with other countries, and all are allowed to obtain knowledge, as in Great Britain and the United States, we find history and the sciences well understood, and knowledge is constantly advancing.

598. *In China and Japan*, they print with blocks of wood, instead of movable types; but they do not allow free commerce with other nations. Hence their knowledge is very imperfect in every thing, and they seldom learn any thing new.

599. *In countries where printing is understood, the diffusion* (or spreading) *of knowledge among the people*, depends on their government, religion, the means of instruction, and the condition of the laboring classes.

600. *In most Pagan countries, the religion teaches* many things contrary to the truths of science, as in Hindostan; and the study of foreign books

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592. What can we do with the knowledge collected in this way? 593. What is said of those nations who have no written language or books? How far can they count? 594. Are all nations who have a written language acquainted with printing? What books have they? What is the effect of this? 595. What can you say of nations like the ancient Greeks, Arabs, and Hindoos? What do they believe? Of what are they ignorant? 596. What can you say of books where the art of printing is known? 597. How is it in such countries when they carry on free commerce with other countries? 598. What can you say of China and Japan? What is the state of knowledge in those countries? 599. On what does the diffusion of knowledge among the people where printing is understood depend? 600. What does the religion of most Pagan countries teach as to science?

is often forbidden. *In nearly all Pagan countries, the diffusion of knowledge* is discouraged either by the government or the religion, and the people are in great ignorance.

601. *In many Christian countries*, the government does not encourage the diffusion of knowledge. In some, it does not even *provide instruction* for the people in reading, that they may learn from books.

602. *In some Christian countries*, the people are not allowed to read the Bible, and many other books; and while there is often a large number of learned men, the people are generally very ignorant.

603. *In many countries, the laboring classes* (who are always the greatest number of the people) are either slaves or serfs, belonging to a master, or so poor that they have no money to buy books, and no time to read them. This is the case in some countries of *Europe*, as well as other parts of the world; where those who have learned to read sometimes forget it for want of books.

SERFS are a kind of slaves, who belong to the estates on which they live, and are sold with them, as in Russia.

604. It is only in countries where the people are free, and able to earn a comfortable subsistence, and are provided with instruction in schools, that we find *knowledge generally diffused among them.*

OCCUPATIONS OF MEN.

605. THE CREATOR *has furnished the earth* with valuable minerals and ores, and with a soil which will produce plants; and *has peopled the land and the sea* with animals, to supply us with food and clothing. These are generally called the *productions of the earth.*

606. But *He requires men to employ* their reason and strength in obtaining these productions for their subsistence; and hence we find the greater part of mankind engaged in some occupation, such as hunting, fishing, agriculture, mining, building, weaving, working in metals, navigation, or printing. All these are called *arts or trades.*

607. *Some tribes or nations are occupied* merely in gathering wild plants, or hunting and fishing for the wild animals on which they live. Hence *their subsistence* is uncertain from day to day, and they are obliged to wander from one place to another in search of it. *They often suffer* with hunger and cold, and many more die in childhood, and from disease, than with us.

608. *Other tribes that subsist by the pasturage of cattle*, are supplied

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What is said of the diffusion of knowledge in nearly all Pagan countries? 601. Is the diffusion of knowledge encouraged in all Christian countries? 602. What is said respecting some Christian countries? 603. What is the state of the laboring classes in many countries? Is this the case in any countries of Europe? 604. Where do we find knowledge generally diffused among the people? **O. M.** 605. With what has the Creator furnished the earth? What has he given to supply us with food and clothing? What are these called? 606. What does he require of men? What, then, are the occupations of men? What are they called? 607. How are some tribes and nations occupied? What can you say, then, of their subsistence? How do they often suffer? 608. What can you say of those tribes that subsist by pasturage?

regularly with clothing, from their hair, wool, and skin, as well as with food from their milk and flesh. *They suffer* less than the hunting tribes, but they do not till the ground, and are obliged to *move* from place to place, to find fresh pasturage.

609. *Both the hunting and pastoral tribes live* in tents, or in rude huts which are easily taken down and rebuilt; and are not settled in one place, except during the cold and rainy season, when they cannot remove.

610. *Nations that till the ground* can obtain regular subsistence, without removing; and hence they build permanent houses, and settle in villages, towns, and cities.

611. *Among settled nations, some of the people are employed* chiefly in obtaining the productions of the earth. *Others are occupied* in preparing them for use; and others still in exchanging these articles, and transporting them from one place to another.

612. *In thinly-settled countries*, most of the people are employed in obtaining or raising the productions of the earth.

613. *In such countries as are covered with forests*, they cut the trees into timber, and kill the wild animals for their flesh and skins; as in many newly-settled parts of North America. *In countries which abound in minerals*, they are more engaged in mining, as in Sweden.

614. *If the ground of a thinly-settled country is fertile*, most of the people are usually farmers, engaged in pasturage or agriculture.

615. *In thickly-settled countries*, there are more inhabitants than are needed to obtain the products of the earth. *Many are therefore employed* in preparing them for use, by the mechanic arts, such as tanning, spinning, weaving, building, and the working of metals. The articles so made by hand are called *manufactures*.

MANUFACTURE is from the Latin words *manu*, by hand, and *factus*, made.

616. *Many others are occupied* in commerce — that is, in buying, selling, and transporting these productions and manufactures; as traders, merchants, land-carriers, boatmen, and seamen; and *others still* find full employment in taking care of their own property, or that of others, or in doing good with their wealth.

In the United States nearly 60,000 persons are employed in navigating the ocean, and 200,000 on our canals, lakes, and railroads.

617. In most countries, one class of people are employed in *making and executing the laws*, and another in *healing the sick*. Others are engaged in

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How do they suffer compared with the hunting tribes? Why are they obliged to remove from place to place? 609. How do the hunting and pastoral tribes live? Are they settled? 610. What can you say of nations that till the ground? 611. How are some of the people chiefly employed among the settled nations? How are others of them occupied? 612. How are people chiefly employed in thinly-settled countries? 613. How are they occupied in countries covered with forests? In countries which abound in minerals? 614. How is it in thinly-settled countries, where the ground is clear and fertile? 615. What can you say of the inhabitants of thickly settled countries? How are many employed? What are manufactures? 616. What other occupations are mentioned?

giving the people instruction in religion and useful knowledge, in churches and schools, and by means of books. All these are generally *called professional men;* or if they merely study and write, *literary men.*

618. A few, in every country, *live in idleness,* some upon their wealth, and some as beggars; but they are neither so healthy nor so happy as those who are usefully employed.

ARTS AND MANUFACTURES.

619. *The hunting and fishing tribes* are scarcely *acquainted with any of the arts,* except those of catching their game, preparing their skins for clothing, and building their huts and tents.

620. *Many of the pastoral tribes* are acquainted with weaving, and some other arts unknown to the hunting tribes; but they are ignorant of most of those practised among settled nations.

621. *The working of metals* is one of the most important arts; because it is very difficult to till the ground, or prepare our food and clothing, and other things we need, without tools and instruments of iron and other metals, such as spades, kettles, saws, and needles.

622. *This art is very imperfectly known* to the wandering nations, both hunting and pastoral. *In these nations,* also, every man makes his own tools, clothing, and hut. Hence they cannot become *skilful* in any trade.

623. *Settled nations* are well acquainted with the working of metals; and every man generally pursues a single trade or art, which is called *the division of labor. Hence,* they have better tools, and more opportunity to become skilful in their business.

624. *Nations differ materially in their skill* in arts and manufactures, as well as in agriculture and mining. Those are generally *most skilful,* in which the arts have been longest known and practised, and in which the division of labor is greatest.

625. *In old and populous countries,* a large part of the people are engaged in the mechanic arts, and labor is much divided. *Hence arts and manufactures* are in a more perfect state in old countries than in new colonies, or in thinly-settled countries.

Thus in England, which has 250 people on a square mile, agriculture and manufactures are much more skilfully carried on than in Russia, where there are 20 people on a square mile; and they are better understood in the old, thickly-settled states of America, than in those which are new and thinly inhabited.

In Switzerland, one person often employs his whole time in making one

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617. What are professional men? Literary men? 618. What is said of those who live in idleness? **A. M.** 619. Are the hunting and fishing tribes acquainted with the arts? 620. What is the state of the arts among the pastoral tribes? 621. What is said of the working of metals? Why? 622. What is the state of this art among wandering nations? Why can they not become skilful in any trade? 623. What is said of settled nations in respect to the arts? What is the division of labor? What effect has this upon the arts? 624. How do nations differ from each other as regards their skill? Which are generally most skilful? 625. How are the people employed in old and populous countries? What is the state of manufactures among them?

part of a watch; and in England, several men are employed to make a pin, so that one only makes the heads, another the points, and several others are employed to finish it.

626. *In some countries where they manufacture only a few articles*, they are often made better than in any other country. Thus the carpets of Turkey and Persia, and the common watches of Switzerland, are superior to any in the world.

COMMERCE.

627. *The farmers and miners of settled nations exchange the productions of the earth* for the manufactures of the mechanic; and each mechanic gives his manufactures for those of others, so that all can easily obtain what they need. This exchange is called *trade or commerce*.

628. *Internal commerce* is that which is carried on to some extent between the people of the same country; as between farmers and those who inhabit towns and cities; or as in the United States, where the cloths, tools, and other manufactures of the Northern States, are sent to the Southern, in exchange for cotton and rice.

629. When the people of a country exchange some of their productions and manufactures for those of other countries, it is called *foreign commerce*. *Thus, the people of the United States* send flour and lumber to the West Indies in exchange for sugar and coffee; and cotton to Europe in exchange for manufactures.

630. Articles sent out of a country in commerce are called *exports*. Those received from abroad are called *imports*. Thus, *we export*, from the United States, cotton, lumber, and flour; and *we import* sugar, coffee, and manufactures.

631. *Commerce between inland countries is often carried on* by conveying goods on the backs of camels, horses, mules, and other beasts of burden. All the commerce *over high mountains*, as in South America, and *across the steppes and deserts* of Asia and Africa, must be carried on in this way.

632. *In such countries, the merchants generally* travel at particular seasons of the year, with large bodies of loaded animals, called caravans.

633. *In very cold countries*, like Russia and Siberia, nearly all the trade is carried on in winter, by means of sledges, upon the snow.

634. *The extent of commerce by land depends upon* the state of the roads, which in some countries are so good, that animals can draw and carry four times as much as in other countries, where they are neglected.

635. In some countries, *railways* are made, on which carriages or cars are moved on iron ways, by means of a steam-engine; and on such roads, the largest quantities of goods are conveyed over the land, in the shortest time.

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626. Where are particular articles sometimes made best? Give examples. C. 627. What do farmers and miners of settled nations exchange, and for what? What is this called? 628. What is internal commerce? 629. What is foreign commerce? 630. What are exports? What are imports? Give examples. 631. How is the commerce between inland countries often carried on? How is the commerce carried on over high mountains? 632. How do merchants generally travel in such countries? 633. How is trade carried on in very cold countries? 634. On what does the extent of commerce by land depend? 635. What is the use of railways to commerce?

636. In countries which have *numerous streams*, commerce is carried on more easily, by boats, on rivers and canals.

637. *By the art of navigation*, we can carry on commerce across the ocean with great ease. *A few men can thus convey* a ship's cargo from Europe to China in 3 or 4 months; while thousands of men and animals would be employed, for one or two years, to carry the same cargo across the land.

638. *In this way, we can obtain* easily, and cheaply, the productions of all countries. Many of these we could not obtain at all by land — or in such small quantities, that they would be too scarce and expensive for common use.

639. *The art of navigation also enables us to send ships* to the most distant seas and coasts, in order to hunt and fish for animals not found near us. This branch of commerce is called *the fisheries*, which support great numbers of fishermen, while they supply millions of other persons with food, and with oil for lights, as well as other useful articles.

640. *But commerce also makes us acquainted with* the plants and animals of other countries which can be made useful in our own, and with the arts and inventions of other nations. *In this way, we gain* many new means of usefulness, and comfort, and enjoyment.

Thus the potato was obtained from America by commerce, and now supplies food to millions of people in Europe; and cotton, rice, and sugar were introduced into the United States from other countries.

By means of commerce, also, we have learned the use of the steam-engine, of railways, and of many other useful inventions of other countries.

641. By the art of printing, even *knowledge can be made an article of commerce*, and conveyed in books from one nation to another. In this way, *we have obtained most of our knowledge;* and *the Bible*, which contains the most valuable of all knowledge, has been carried by means of commerce to all parts of the world.

642. Hence we find that those *nations* which have the most extensive commerce on the ocean, *are most advanced in knowledge and arts.* Commerce, and the arts, especially the arts of navigation and printing, are thus very *important means of improving mankind*, when they are rightly used.

CIVILIZATION.

643. *Civilization consists of two parts:* 1st, knowledge and arts — and 2d, justice and kindness in men towards each other. The knowledge of true religion is now carried, with the arts, by commerce; and hence, *these two parts of civilization* are generally found together.

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636. How is commerce carried on in countries that have numerous streams? 637. How can we carry on commerce by the art of navigation? What great advantage has commerce on the ocean? 638. What can we obtain in this way? Could we not obtain them in any other way? 639. What else does the art of navigation enable us to do? What can you say of the fisheries? 640. What does commerce make us acquainted with? What do we gain in this way? 641. How can knowledge be made an article of commerce? How have we obtained most of our knowledge? How has the Bible been spread over the world? 642. What nations are most advanced in knowledge and arts? What great uses have commerce and the arts? Q. 643. Of what does civilization consist? What can you say of the two parts of civilization?

644. *Nations that live by hunting and fishing*, like the American Indians, usually have little knowledge of other arts; and most of them are ignorant of the true religion.

They are generally unjust and unkind to each other, and often rob and murder each other, and especially strangers, for gain or for revenge. They are usually called *savages*.

645. *Those who live by pasturage*, like the Tartars, and move from place to place, have more skill in the arts than hunters, and some have books and regular laws.

But they are generally Pagans or Mahometans. They are unjust and cruel in their customs, especially to strangers, and live in part by robbery. They are usually called *barbarous nations*.

646. Both savage and barbarous nations oblige their women to work like slaves.

Wandering shepherds, or herdsmen, are sometimes called *nomades*, or wanderers. When they have the true religion, like Abraham, Isaac, and Jacob, they have a better state of society, and practise justice and kindness to all. But few, if any, such tribes are now to be found in the world.

647. *Nations that are settled*, and subsist by agriculture, are generally more advanced in knowledge and arts than wandering nations; but *the state of society as to justice and kindness* depends on the character of their religion.

648. *The settled nations of the African race*, in Middle and Southern Africa, have such false and cruel systems of religion, that they are inferior in character to most barbarous nations of Asia, and *must likewise be considered* as barbarous.

649. *The settled nations of Asia and Northern Africa*, such as the Chinese, Hindoos, Moors, and Egyptians, are well acquainted with agriculture and many of the arts, and have some books and learning. Still they have false *religions*, which do not generally teach them justice and kindness to all; they treat their women as slaves, and have many cruel *customs and laws*. *They are therefore called* half civilized.

650. *In Europe, and in other countries settled by Europeans*, we find knowledge and arts in their most perfect state, enabling men to do all that is necessary for their support, comfort, and improvement.

651. *Their religion and laws require* men to be just and kind to others, even to strangers; they treat their women as companions; and have numerous books, which enable them to improve constantly in all useful knowledge.

652. *These are called* civilized nations. Those civilized nations in which knowledge is most generally spread are called *enlightened nations*.

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644. What knowledge have the nations, that live by hunting and fishing, of the arts? Of religion? How do they treat each other? What are they usually called? 645. What can you say of those who live by pasturage? What is their character? What are they usually called? 646. How do savage and barbarous nations treat their women? 647. How are settled nations as to knowledge? On what does the state of society among them depend? 648. What can you say of the settled nations of the African race? To what class of nations do they belong? 649. What of the settled nations of Asia and Northern Africa? What is said of their religions? What are they called? 650. What is the state of the nations in Europe, and in countries settled by Europeans? 651. What do their religion and laws require? 652. What are these nations called? What are enlightened nations?

653. *Those nations have the best character for justice and kindness*, who are best acquainted with the Bible; and some Christian countries where it is little known are very deficient in both.

The degree of civilization of each country is marked on the Moral Chart by shades, which are there described.

EXERCISES ON THE MORAL AND POLITICAL CHART OF THE WORLD.

In which grand division of the earth does the Christian religion prevail most extensively? Where can the Mahometan religion be found in Europe? In which grand division, next to Europe, does Christianity prevail most extensively?

In what parts of North America does it prevail? What Christian colonies are there in Africa? What other country in Africa has a corrupt Christianity? Which grand division of the world is chiefly Pagan? What countries of Asia are Pagan? Which of these are in part Mahometan? Which have Christian inhabitants? What countries are Mahometan? What country near the Black Sea is Christian? (*The Nestorians, whose country borders on Armenia, are also Christian.*) Are there any Mahometan countries in America? What Pagan country in Europe? What countries in Africa are Mahometan? Which are Pagan?

In which grand division of the world is the Greek Church found? In which two grand divisions do we find Protestant countries? What form of the Christian religion prevails in South America? In what other grand division do we find Roman Catholics? What Protestant country in Africa? What Roman Catholic countries in North America? What are the religions of Hindostan and Ceylon? In what Pagan countries do we find missionary stations? (*The Jews are scattered throughout most countries of the world in small numbers.*)

In which grand divisions of the world do we find civilized countries? Name the countries which are civilized in Europe. In North America. In South America. What other civilized countries or colonies are there in the world? What parts of the Western Continent are in a savage state? What of the Eastern? Is any part of Europe in the savage state? What countries are barbarous? What countries in the world are half civilized?

Which quarter of the world has the greatest extent of country in a savage state? Which has the least? Which state of society prevails over the greatest portion of the earth's surface? Which is next in extent? Which the least?

What is the state of society in most Christian countries? What is the reason that Abyssinia is in a barbarous state? (*See* ¶ 584.) Are there any Mahometan and Pagan countries that are fully civilized? Which are half civilized? What is the state of society of most of the Pagan nations you find? What of most of the Mahometan nations?

What are the principal forms of government in the world? (*See explanation of emblems.*) What countries of America have republican governments? What in Europe? Which countries of Europe have monarchical or imperial governments? Which in Asia? Which in Africa? Is there any of this kind in America? What countries in Europe have limited monarchies? Are there none of this description in any other quarter of the world but Europe? What countries in America are governed by foreign governors? What in Asia? What in Africa? Name the countries of Asia governed by independent chiefs or dukes. Of Africa. Of America. Are there any in Europe? (*There are several in Germany and Italy besides those distinguished on the Chart.*)

BUILDINGS.

654. *The dwellings of the wandering tribes* of Tartars, and the Bedouins of the Arabian and African deserts, are tents covered with felt, cloth, or skins. A village is merely the encampment of a horde or tribe, and is moved from place to place, as convenience requires.

653. What nations have the best character for justice and kindness? Ex. **B.** 654. What are the dwellings of wandering tribes? What are their villages?

655. *Savage nations usually live* in huts, constructed of different materials, and with various degrees of skill, according to the situation and character of the people. They are generally formed of stakes or poles, interwoven with twigs, and covered with bark or leaves, or plastered with clay. The fire is made in the centre, and the smoke escapes at the top. Those of the North American Indians are called *wigwams;* but some of the savage tribes live in tents of skins. Their villages consist of an irregular collection of these huts or tents.

656. *The natives of South Africa* form their huts of bent poles, plastered with earth, much resembling a beehive. They are arranged in a circle around an enclosure which contains their cattle; and the village is termed a kraal. A number of villages formed around the missionary stations of South Africa, and Sierra Leone, have a neat appearance, and present many of the improvements of civilized life.

657. The Laplanders, Northern Siberians, and the North American *tribes of the Frozen Regions*, usually reside during the summer in tents, or huts constructed of light materials. But *the winter huts* are built with thick walls of stone and turf, with no outlet for the smoke except the entrance. *In Greenland and Lapland*, they are protected from the cold winds by a long, vaulted passage for entrance; and, to render them still warmer, many of the tribes of these regions build them half under ground, and enter through an opening at the top, by means of a ladder.

658. *The Esquimaux of North Georgia* make their winter huts of snow, which is so compact that it may be cut into blocks, and used like stone. A dwelling of this kind is beautifully transparent; and when lined with skins and branches of trees, it is said to form a comfortable winter residence in these dreary regions. (*Parry.*)

659. *In the Torrid Zone*, many of *the uncivilized nations* build their huts of very slight materials. They are often mere sheds, used only as a protection from the rains and dews. *In Polynesia*, and some of the Asiatic islands, they are very neatly built of canes, are lined with mats, and covered with leaves. The same style of building is found *in Hindostan and Farther India*, and to a considerable extent in *China;* and these, or mud-walled huts, are the best buildings of the poor.

660. *The residence of a king, in Africa*, appears like a collection of thatched barns and hovels, surrounded by a mud-wall. *The palace of the emperor of China* is only a collection of cottages, in which the meanness of the structures is concealed by splendid curtains and gilded ornaments. *The dwellings of the great*, in countries not fully civilized, are distinguished by the number of buildings, and the great extent of ground they occupy, rather than the superiority of architecture.

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655. How do savage nations usually live? What are their villages? 656. Describe the dwellings of the South Africans. 657. Of the tribes of the Frozen Regions. 658. Of the Esquimaux. 659. How do the uncivilized nations of the Torrid Zone build their dwellings? The people of Hindostan and Chin-India? 660. What can you say of the palaces of the kings in Africa? Of the emperor of China? Of the dwellings of the great?

661. The dwellings of uncivilized nations have rarely more than a single *room and fire*. *In the Frozen Regions*, several families are usually crowded together, each occupying a stall formed by posts or skins. They are lighted by a large lamp, composed of moss, and supplied with oil, which also serves as a fire. The domestic animals often partake of the comfort and filthiness of these habitations.

662. *The hovels of the poor in most nations* of Asia, and even in *Russia, Poland*, and some parts of *Austria, Germany*, and *Ireland*, are little superior, in structure or cleanliness, to those of savage nations; and are inferior to those of many nations in Polynesia.

663. The arts and refinement of *civilized nations* lead those who are not poor to build more substantial and convenient *dwellings*, which furnish a complete protection from the weather. They are found with every degree of comfort and elegance, from the plain cottage of the farmer to the splendid palace of the noble.

664. *In the cities of civilized countries we find* many fine dwellings for the rich, extensive magazines, and stores, and workshops, together with churches and other buildings for public use which are often grand or beautiful, arranged on regular streets and squares. The account of cities, in each grand division, shows the different modes of building.

ROADS.

665. *Among savage and barbarous nations*, no roads exist but the paths which are formed by the frequent passing of travellers. *In nations which have become civilized*, the introduction of commerce leads to the establishment of roads; and by making communication more easy, they increase the knowledge, and improve the state of the people.

666. *In half-civilized countries*, carriage-roads are rare. *The people travel* on camels or horses in Arabia, Turkey, Persia, and Northern Africa; and, in India, on elephants, or in palanquins, or couches carried by men. The energy of the government, and industry of the people, *in China and Japan*, have led to the construction of numerous roads, some of which are remarkable.

667. *In most civilized countries*, roads are made and repaired with care, in order to increase commerce. They are even carried over lofty mountains, so that carriages can pass even the Alps with ease and safety.

668. In the United States, as in Great Britain and other countries of Europe, *railways* have been made, (*see* ¶ 635,) on which a ship's cargo, of moderate size, can be transported at once, more rapidly and certainly than in any other mode. Their number is constantly increasing, and commerce is rendered more easy.

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661. How are the dwellings of uncivilized nations divided? 662. What can you say of the dwellings of the poor in Asia and some parts of Europe? 663. What kind of dwellings do the rich build in civilized countries? 664. What do we find in the cities of civilized countries? **R.** 665. What roads do we find among savage nations? 666. How do the people travel in half-civilized countries? 667. What can you say of the roads in civilized countries? 668. Of railways?

STATISTICAL GEOGRAPHY;

OR

DESCRIPTION OF COUNTRIES.

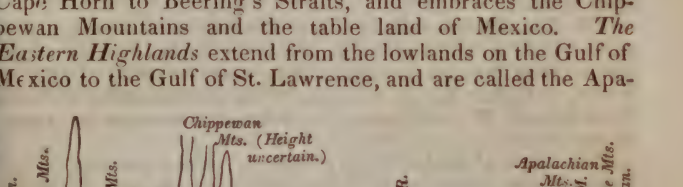
NORTH AMERICA.

I. * 669. NORTH AMERICA *surpasses all other portions of the world* in the size and number of its lakes, and all except South America, in its rivers; but *its mountains* are inferior in height to those of Asia and South America.

I. *Questions and Exercises.*—669. What can you say of N. America compared with other parts of the world?—*Physical Map of N. America.* On which continent is N. America? In what zones? How is it bounded? How is it united to South America? What figure will enclose the greater part of it? (¶ 200.) Has it many bays and peninsulas? What proportion of sea-coast has it? (¶ 201.) Has it any islands around it?

HIGHLANDS.

I. 670. North America has two great ranges of *highlands* — the western and the eastern. *The Western Highlands* belong to the great American chain, which extends from Cape Horn to Beering's Straits, and embraces the Chippewan Mountains and the table land of Mexico. *The Eastern Highlands* extend from the lowlands on the Gulf of Mexico to the Gulf of St. Lawrence, and are called the Apalachian Mountains. Both are shown in the profile (Fig. 80) of the principal ascents and descents, found in crossing North America from West to East.



(80) *Profile of N. America across the United States.*

* Paragraphs or chapters, and questions, marked **I.** are designed for the first course of study; and those marked **II.** and **III.** for the second and third courses; that is, each is to be studied on reviewing what has already been learned.

I. *Questions and Exercises.* — 670. What highlands has N. America? Describe the Western Highlands. The Eastern. — *Physical Map of N. America.* In what directions do the rivers flow from the Western Highlands? In what directions from the Eastern? What great river flows S. between them? Where do the branches of the Mississippi on the eastern side rise? Where those on the western side?

II. *Exercises on the Profile.* — The dark parts of the profile show the common level of the ground; and if you will follow the upper line of the dark part, you will see how you must go up and down in crossing N. America from East to West. What mountains must you cross first in going West (or to the left) from the Atlantic Ocean? What great river basin do you find on descending from the Apalachian Mountains towards the West? What is the lowest point in the basin of the Mississippi? Does the land rise or fall W. of the Mississippi? What mountains must you cross next? What declivity lies W. of the Chippewan Mts.?

The mountains which are not dark are some of the highest peaks. What peak is there near the Pacific Ocean? What peaks among the Apalachian Mountains? Are the peaks of the Chippewan Mountains higher than these? (*Their greatest height is unknown; and therefore the tops of some are left unfinished.*)

II. 671. North of the Isthmus of Panama, *the Cordillera, or American chain,* rises to the height of 8000 feet, forming the Cordillera of Central America; and passes, under various names, through the western part of North America, to the Arctic Ocean.

672. As it proceeds North, *it spreads* into the table land or plateau of Mexico. This is one of the most populous table lands in the world — about 8000 feet in height, and at the North, 300 miles *broad.*

673. *The Mexican table land is bordered* on each side by mountains, which do not rise much above its level. A lofty range *passes North through the middle* of it, which is called the Sierra Madre, or Mother Range, *extending* to the mountain-knot of Santa Fe, in latitude 37°, and forming the water-shed between the Atlantic and Pacific.

674. *North of Santa Fe,* the mountains spread into four or five distinct ranges, separated by broad valleys, and *take the name* of the Chippewan, or Rocky Mountains.

675. *The Chippewan Mountains* have not been fully *explored;* but the valleys are said to be well watered and fertile, and one pass, at least, is easy for carriage roads. Many of their peaks are white with perpetual snow.

676. *A portion of this chain runs North-West,* in low hills, to the Arctic Ocean, separating Mackenzie's R. from the western declivity.

II. 671. What can you say of the Cordillera, or American chain, in Central America? 672. What plateau or table land does it form, and where? 673. How is the table land of Mexico bordered? What range passes over it? Describe the Sierra Madre. 674. How does this range spread at the North? What name is given to this part of the American chain? 675. What can you say of the Chippewan Mountains? 676. Does any part of this chain extend to the Arctic Ocean?

677. A separate mountain range runs parallel to the coast of the Pacific Ocean, which is called *the Californian or Cascade Mountains*, or by some geographers, *the American Maritime Alps*. This range contains many lofty peaks, covered with perpetual snow, among which are Mt. Fairweather and Mt. St. Elias.

678. *The continuation of this chain* may be traced in the Aleutian Islands, which *also contain* burning volcanic peaks, rising through perpetual snow.

679. *The western declivity of the Chippewan Mountains* is little known, except on the Columbia River; but it appears to be generally a rugged, barren region.

680. *The basin of the Columbia River is separated from California* on the South by the Snowy Mountains, which run from Cape Mendocino to the Chippewan Mountains; and *is divided* into three portions. *The productive lowlands extend* from the coast to the California Mts. *The first terrace*, or middle country, lies between these mountains and a broken range called the Blue Mts.; and *the second terrace*, or upper country, extends from this range to the peaks of the Chippewan Mts.

681. *The eastern highlands of North America* form a broad table land, extending from the Gulf of Mexico, North-East, to the Gulf of St. Lawrence, between the lowlands of the Atlantic and the basin of the Mississippi.

682. *This table land is traversed* by several ranges of mountains, of which the Allegany is the highest. Hence *the name* Allegany has been given to the whole chain; but the best American geographers have called it *the Apalachian Chain.*

683. *The northern declivity of North America* is crossed in every direction by ranges of rocks, some of which rise into mountains; but none appear to be very high.

XI. *Exercises on the Physical Map of N. America.— Sea-Coast.* What capes form the extreme points of N. America on the E., W., and S-E.? Mention some of the principal capes on the eastern coast; on the western.

What gulf S. of North America? What two large bays in the N-E.? What straits form the northern boundary? What straits lead into Hudson's Bay? What bay between Nova Scotia and New Brunswick? What gulf N-W. of Newfoundland? Where are Beering's Straits? What gulf and sounds on the western coast?

Highlands. What highlands in the western part of N. America? Where do they commence at the S.? With what chain of S. America do they appear to be connected? How many branches have they on the peninsula? What is the central chain called? What table land do they form? What is the chain called N. of latitude 40°? What course does it take?

XI. 677. What are the American Maritime Alps? What lofty peaks have they? 678. Where can you trace the continuation of this chain? 679. What can you say of the western declivity of the Chippewan Mts.? 680. Of the basin of the Columbia River? 681. What do the eastern highlands of N. America form? 682. What ranges of mountains on it? What can you say of the name of these mountains? How far does it extend? 683. What can you say of the northern declivity of N. America?

Is there a range of mountains W. of these, and where? What branch passes off from the eastern border of the table lands of Mexico, and in what direction? What other branch N. of latitude 40°? What highlands in the eastern part of N. America? Where do they commence at the S., and what is their course and termination?

BASIN OF THE MISSISSIPPI.

I. 684. *Between the eastern and western highlands* of North America is the great basin of the Mississippi River. *It extends* from the Gulf of Mexico on the South, to the basin of the St. Lawrence on the North.

685. *It is generally* level; but *it is crossed by* some branches of the highlands.

I. *Questions and Exercises.* — 684. What great basin between the eastern and western highlands of N. America? How far does it extend N. and S.? 685. How is it generally? How is it crossed? *Phys. Map of N. A.* How is the basin of the Mississippi bounded on the East and West? How on the North and South?

II. 686. *West of the Mississippi River*, the Sierra of Texas passes off from the border mountains of the Mexican table land, and running North-East through Texas, it extends to the mouth of the Missouri, under the name of the Ozark Mountains.

The Wisconsin Hills appear to be a continuation of this range. *The Black Hills* are a low range separating the Yellowstone River and its branches from the Missouri.

687. *In the middle of the basin*, East of the Mississippi River, we find several branches of the eastern highlands, of which the Cumberland Mountains are the principal.

688. *The eastern terrace of the Chippewan Mountains*, which forms a part of the basin, is a region of vast plains, some of which furnish pasturage to herds of buffaloes. *The southern part* forms the Great American Desert — a region of rocks, and sand, and salt streams.

689. *The western terrace of the Apalachian Mountains* is an undulating country, spreading toward the Mississippi into vast prairies without a hill or a tree. (*See* ¶ 288.) *The country West of the Mississippi* appears to have the same varied character, as far as longitude 96° West.

690. *The whole basin of the Mississippi is watered* by numerous streams, and has a soil of uncommon fertility, especially in the valleys of the streams, and the lowlands of the Gulf of Mexico.

II. 686. What Sierra West of the Mississippi River? Describe its direction and extent. 687. What mountains do we find in the middle of this basin? What are the principal? 688. Describe the terrace of the Chippewan Mountains. The southern part. 689. Describe the western terrace of the Apalachian Mountains. What is said of the country West of the Mississippi? 690. How is the whole basin of the Mississippi as to water and soil?

I. BASIN OF THE ST. LAWRENCE.

691. *The basin of the St. Lawrence and the great lakes* is a long, and generally a narrow tract, extending from the sources of the Mississippi, West of Lake Superior, to the Atlantic Ocean. *It separates* the basin of the Mississippi from the northern declivity of North America.

692. *On the rivers and lakes*, this basin is level and fertile. *A large part of it* is rugged, and unproductive or barren.

I. *Questions and Exercises.* — 691. Describe the basin of the St. Lawrence. What does it separate? 692. What are the surface and soil of the basin of the St. Lawrence? Has it any mountains? — *Phys. Map of U. States.* In which part of this basin are the lakes? In which is the river?

II. SOUTHERN DECLIVITY, TERRACES, AND LOWLANDS.

693. *The southern declivity of North America* consists of the basin of the Mississippi, already described, and the lowlands of the Gulf of Mexico.

694. *The lowlands* are very flat, and rise very little above the level of the sea; so that many parts are rendered *swamps*, by the tides of the sea, or the floods of the rivers.

695. *The greater part of the southern lowlands* is very fertile; and they are rendered unusually productive by the heat of the climate.

696. *The lowland of the Atlantic declivity* extends from Florida to the Hudson River. *It consists chiefly* of sandy pine barrens, or of swamps. *Many of the swamps* produce rich crops of rice.

697. *The Atlantic terrace of the Apalachian Mountains* East of the Hudson River, where it extends to the ocean, is rugged and mountainous, and is not generally very productive.

698. *South of the Hudson River*, the terrace is less rugged; the soil is more fertile; and a mild climate renders it very productive.

II. *Exercises on the Physical Map of N. America. — Lakes.* What six lakes are formed by the R. St. Lawrence, beginning at Lake Superior? Which is the largest, and which the smallest? What lake is next to the Lake of the Woods on the N-W.? What others beyond this in the same direction? Which is the most northern? What are the two principal lakes on the peninsula of Mexico? Where does Nicaragua empty, and by what river? What other lakes on the western declivity, near latitude 40°?

Rivers. What are the two principal rivers flowing from the Chippewan Mountains into the Pacific Ocean? What two rivers empty into the Arctic Ocean? Mention some of the rivers emptying into Hudson's Bay. What

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II. D. T. L. 693. Describe the southern declivity of N. America. 694. What is said of the lowlands? What effect have the tides of the gulf, and river floods? 695. How is the soil? 696. How far does the lowland of the Atlantic declivity extend? Of what does it consist? 697. What can you say of the Atlantic terrace of the Apalachian Mts. E. of the Hudson River? 698. How is it S. of the Hudson?

river runs from the great lakes into the Gulf of St. Lawrence? What are its principal branches? What two great rivers empty into the Gulf of Mexico? What are the principal rivers that flow into the Mississippi from the W.? What large river from the E.? What rivers W. of the Mississippi flow into the Gulf of Mexico?

Describe the branches of the Columbia. From what lakes does McKenzie's River flow? What lakes supply Churchill River? What river runs from Lake Winnepeg to Hudson's Bay? What river flows from Lake St. Joseph into Hudson's Bay? What rivers empty into Hudson's Bay on the S. and E.? Where does the Mississippi rise? Describe the branches. What great branches has the Missouri, and on which side are they? What streams flow into the Pacific Ocean, S. of the Columbia R.?

I. NORTHERN DECLIVITY.

699. *The northern declivity* of North America extends from the sources of the Mississippi, and the basin of the St. Lawrence, to the Northern Ocean.

700. *This declivity* is crossed in every direction by low ranges of rocks, as already stated. *The valleys* are filled with lakes and streams; most of which are connected during the floods in the warm season, and are frozen or dry during the greater part of the year. *The borders of Hudson's Bay* abound in swamps.

I. *Questions and Exercises.* — 699. What is the extent of the northern declivity of North America? 700. What can you say of its rocks and valleys? Of the borders of Hudson's Bay? —*Physical Map of N. A.* Into what parts of the ocean do most of the rivers of N. America flow, which are N. of the St. Lawrence? What peninsula belongs to the northern declivity? By what mountains is the northern declivity bounded on the West?

I. PHYSICAL AND POLITICAL DIVISIONS.

701. *The chief physical divisions of N. America* are, — the elevated peninsula of Mexico on the south; — the eastern and western declivities of the highlands, (¶ 670;) — the basin of the Mississippi which lies between them, in the middle regions; — and the northern declivity.

702. *The great political divisions* are British America and Russian America in the North, the United States in the middle regions, and Mexico and Guatemala, or Central America, in the South, as described, p. 73–4.

I. *Questions and Exercises.* — 701. What are the chief physical divisions of North America? 702. What are the great political divisions?

I. EXERCISES ON SITUATIONS.

Note to the Student. — You cannot consider yourself well acquainted with the map of a country, until you know every gulf, bay, peninsula, cape,

island, river, and lake, just as you know a tree or an animal, — *by its shape*, — without having the name written for you. Study the Physical Map of N. America until you can distinguish and point out every thing it contains on the Political Map; and then answer the following questions from the Political Map.*

I. SITUATION AND BOUNDARIES OF COUNTRIES.

On the Political Map of N. America, point out the northern declivity. What political division of N. America occupies this declivity? Where is Russian America? What physical divisions are there in the middle regions of N. America, between latitude 30° and 50° North? What country occupies the greater part of these? What country lies next S.-W. of the United States, on the Gulf of Mexico? What countries occupy the southern peninsula of N. America? What are on the western declivity?

How is Russian America bounded? What is its chief village, situated on the Island of Sitka? How is British America, with its provinces, bounded? Mention some of its principal towns.

How are the United States bounded? Describe particularly the boundary from the Chippewan Mts. East to L. Ontario. Describe the northern boundary particularly, from L. Ontario to L. Champlain. (*See Map N. Division U. States.*) Describe the boundary from Lake Champlain to the Bay of Fundy. (*See Map of Eastern States, and note to page* 73.) How are the United States separated from Mexico on the South-West? What is the capital of the United States? Mention some of the Seaports?

How is Mexico bounded? In what physical divisions does it lie? How is Guatemala, or Central America, bounded? What is its capital?

Moral and Political Chart.—What is the government of Central America? Mexico? The United States? To what foreign countries are the northern countries subject?

I. OCEANS, GULFS, BAYS, AND STRAITS.

Oceans. — Point out, on the Political Map of N. America, the Arctic Ocean — The Pacific — The Atlantic. On which side of N. America does each of these oceans lie?

Gulfs and Bays. — Point out, on the same map, Baffin's Bay. How is it situated; that is, in or near what country, and in what direction from it? In the same way, point out and tell the situation of Hudson's Bay — G. of St. Lawrence — B. of Fundy — Massachusetts B. — Delaware B. — Chesapeake B. — G. of Mexico — Caribbean Sea — G. of Darien — G. or B. of Panama — G. of Honduras — Campeche B. — G. of California — Monterey B. — Nootka Sound — Coronation G.

Straits. — In the same manner, point out and describe the situation of

* It will be a great assistance in this task, to draw the outlines of each part of the map, even if imperfectly; first, the parts N. of latitude 50°, with the coast, bays, and peninsulas, adding the rivers afterwards; then the parts between 30° and 50°; and last, the parts S. of latitude 30°

the following straits, and mention what waters they connect: Davis's Straits — Hudson's S. — S. of Bellisle — Straits of Canso — Strait of the Florida, or Gulf Stream — Windward Passage — Mona Passage — S. of Fuca, (*N. W. Coast,*) Queen Charlotte's Sound — Beering's S. — Barrow's S.

I. PENINSULAS, CAPES, AND ISLANDS.

Peninsulas. — Describe the situation of Labrador — Nova Scotia — Florida — Yucatan — California — Alaska.

Capes. — In what country, and what part of it, is Cape Farewell? C. Charles (*latitude* 52°?) C. Race? C. Sable (*lat.* 44°?) C. Hatteras? C. Sable (*lat.* 24°) — C. St. Antonio — C. Catoche — C. St. Lucas — C. Mendocino — C. Prince of Wales — Icy C. — C. Barrow — Point Turnagain.

Islands. — Point out, and tell, near what point or part of N. America, and in what direction from it, the following islands are situated: Newfoundland, Cape Breton, Prince Edward, and Anticosti. (*In what gulf?*) Long Island — Bermudas — Bahama Isles — Cuba — Jamaica — Hayti — Revillagigedo Isl. (*W. coast.*) Vancouver's I. — Queen Charlotte's I. — Sitka I. — Aleutian Isles, which include the Fox Isles — Melville I.

I. MOUNTAINS, RIVERS, AND LAKES.

Mountains. — Where are the Chippewan or Rocky Mountains — Mt. St. Elias — The Black Hills — Ozark Mts. — Apalachian Mts.?

Rivers. — Point out, and tell, in what country, and in what part of it, the following rivers are found: Mississippi — St. Lawrence — McKenzie's — Copper Mine — Great Fish — Missinippi, or Churchill — Nelson's — Columbia — Colorado — Del Norte — Sabine — Missouri — Ohio.

Lakes. — Point out, and describe, the situation of the following lakes: L. Superior — Huron — Michigan — Erie — Ontario — Great Bear L. — Slave L. — L. Winnipec — L. of the Woods — L. Nicaragua.

II. *Relative Situations, or Bearings and Courses.* — What is the course of the coast from Nova Scotia to Florida? What is the direction from Nova Scotia to Oregon Territory? From C. Farewell to Hudson's Bay and Mt. St. Elias? Which way is the G. of Mexico from Hudson's Bay? California from Florida? What is the general course of the Chippewan Mts.? Of the Apalachian Mts.?

Point to Washington. In what direction from Washington is Hudson's Bay? Nova Scotia? The Bermudas? Florida? Cuba? Venezuela (S. A.)? New Grenada? Central America? Mexico? Texas? Oregon? Russian America? Labrador? Iceland? Norway? England? The Azores? Windward Isles?

II. NAVIGATION.

703. We have already seen (¶ 200) that North America is indented with numerous *bays and harbors*, and that it has greater advantages for *foreign commerce* than any other division of the world except Europe. (¶ 201.)

704. *It is traversed* by numerous rivers, on which navigation is

II. N. 703. Has N. America advantages for foreign commerce? Why? 704. What navigation is afforded by its rivers?

extended from the ocean to the centre of the continent; and a ship may sail directly from the state of Ohio to Europe and Asia.

705. *The Mississippi and its branches* furnish a direct passage, either for ships or large boats, from the Gulf of Mexico to almost every part of its great basin.

Steamboats may ascend the Mississippi to the Falls of St. Anthony; and they have ascended the Missouri, and some of its branches, to the foot of the Chippewan Mountains.

706. *Many of the smaller streams of the Gulf of Mexico* are so deep, as to admit of steamboat navigation for a considerable distance into the interior.

707. *The St. Lawrence* opens a passage for ships of 600 tons to the rapids of Montreal; and above the rapids, large vessels can traverse the lakes.

708. The numerous *rivers of the Atlantic declivity* rise and fall with the ocean tides, for some distance from their mouths, and afford navigation for sloops, and often for ships, as far as the falls which are found at the descent from the terrace to the lowland. *The boat navigation* generally extends to the foot of the mountains.

709. *In the Hudson River alone*, the tide passes, and sloops sail, through the first range of highlands, nearly to the borders of the western terrace.

710. *The rivers of the northern declivity* are so full of falls and rapids, that it is difficult to navigate them, even in canoes; and they are frozen for the greater part of the year.

711. *The Columbia River* is navigable nearly 200 miles for sloops; and for boats to the Great Falls, 260 miles from the sea.

II. CLIMATES AND PRODUCTIONS.

712. *North America extends* into all the Northern Zones, and has every variety of *climate and productions*. *But every part* which is habitable for settled nations *produces*, in abundance, what is necessary for the support of man; and famine is unknown, except among the savage tribes.

713. *In the Mexican Peninsula*, we find, on the lowlands, the climate of the Equatorial Region, and its richest productions.

714. *The table land* has a climate like that of spring, (*see* ¶ 487,) with the plants of temperate countries; although *the mountains* rise into the regions of perpetual frost and snow.

II. 705. What do the Mississippi and its branches furnish? How far can boats ascend on the Mississippi? On the Missouri? 706. What is said of the smaller streams of the Gulf of Mexico? 707. How far can ships ascend the St. Lawrence? 708. What is said of the navigation of the rivers of the Atlantic declivity? How far does the boat navigation usually extend? 709. What is said of the Hudson River? 710. What can you say of the rivers of the northern declivity? 711. What of the Columbia River? **C. P. II.** 712. What can you say of the climate and productions of N. America? Do all parts produce enough to support man? 713. What is the climate of Mexico? 714. Of the table land?

715. *The northern shore of the Gulf of Mexico belongs* to the Hot Regions, and produces the sugar-cane and coffee. *The Warm Regions*, which yield cotton, rice, and most other productions of this climate, extend to 36° or 38° North latitude, on the eastern coast; and still higher on the western.

716. In the Warm, Temperate, and other colder regions of North America, on the eastern coasts, and in the interior, *the climate is* much colder than it is in the same latitudes on the western coast of either continent. (*See* ¶ 489.)

Thus the mean temperature of the year in Massachusetts, in latitude 42½, is as cold as at the mouth of Columbia River, in latitude 45½, or in Paris, in latitude 48½; and the winters are much more severe.

717. *The Temperate and Cold Regions*, or the regions of grass and grain, embrace the division of the United States north of latitude 36½°, and the British Provinces on the St. Lawrence, and the sea-coast, as far as 50° North. *On the western coast*, they extend as far as 60° North.

718. *These portions of North America* have hot *summers*, and in the northern parts, severe *winters;* but *they produce* abundantly the plants of their respective regions.

719. *The northern declivity* of North America lies in the Wintery and Frozen Regions. The climate is severely cold; *the waters* are frozen for the greater part of the year; and the short *summer* only produces grass and berries, and maintains the life of the mosses and a few dwarf evergreens.

720. *The animals of North America* are chiefly such as belong to the Temperate Regions. The largest land animals are the Bison or American Buffalo, and the fierce Grisly Bear, found beyond the Mississippi River.

721. *The climate of North America is generally remarkable* for its great and sudden changes. *The winds* bring, alternately, the cold of the Frozen Regions, and the heat of the Gulf of Mexico — the moisture of the ocean, and the dryness of the land.

II. *Exercises on the Chart of Climates.* — In what zones does N. America lie? How far North does the Equatorial Region extend? What productions will you find in the lowlands of Mexico? What in the highlands? (*See* ¶ 487, *and the chart.*) How far do the Hot Regions extend? The Warm Regions? Where does the Temperate Region begin? How far does it extend on the eastern coast? On the western? What parts of N. America are in the Wintry and Frozen Regions? What productions have they?

II. 715. Of the northern shores of the Gulf of Mexico? How far do the Warm Regions extend? 716. How are the climates of North America on the eastern coast, compared with those of western coasts? 717. What parts are in the Temperate and Cold Regions? How far do these regions extend on the western coast? 718. What can you say of the seasons? Of the products? 719. In what regions does the northern declivity lie? What can you say of the climate? 720. What can you say of the animals of N. America? Mention some of the principal and largest of the animals. 721. What is generally remarkable in the climates of N. America? What is the cause?

III. INHABITANTS.

722. *North America contains three distinct races of men;* (1) The Indians of the American race, by whom it was formerly inhabited and possessed; (2) Europeans, and their descendants, who settled here in colonies; and (3) Africans, brought by Europeans as slaves, to cultivate the ground.

723. *The Indian tribes, in the middle and northern parts,* have been gradually driven from their old habitations near the coast, to the regions West of the Mississippi, and North of the St. Lawrence.

724. *They are generally Pagans,* in a savage state; but are superior, in intelligence and character, to most other savage tribes. *Some tribes have become* settled and civilized, chiefly by the labors of missionaries; and some have embraced Christianity.

725. *The Esquimaux Indians,* who inhabit the coasts on the North, are inferior to the rest in intelligence, and appear to be of the *Asiatic race.*

726. *In the southern peninsula, the Indians* were far advanced in the arts, and settled in large, well-built, populous cities, when the Spaniards came, and made them slaves. When Mexico and Central America became republics, *they became* citizens.

727. Of the European race, *the Spaniards are found* almost exclusively in Mexico and Central America; but they are so *mixed* with the Indian race by intermarriage, that three fourths *of the population* are either Indians or Mestizoes, that is, persons of a mixed race.

728. The former government discouraged *the diffusion of knowledge* in Mexico and Guatemala; the people are still forbidden to read *the Bible;* and the ignorance and low state of civilization, produced by these causes, have been continued, since their independence, by *wars* among themselves.

729. *Some of the arts* are well understood; but generally, arts, *manufactures,* and *commerce,* are in a low state. *The people* are very corrupt, and life and property are not safe among them.

730. *The middle regions of North America were settled* almost entirely by the English, Scotch, and Irish. *The English language* is universally *spoken by the civilized population,* except in Louisiana and Lower Canada, which were formerly colonies of France, and in some of the German settlements, which retain their own language and customs.

731. *In the middle regions, the people of the European race* are familiar with all the arts and sciences. Knowledge is more diffused, and *justice* and *kindness* are more generally practised, than in the South.

III. I. 722. What races of men inhabit North America? 723. What is said of the Indian tribes in the middle and northern parts? 724. What is their religion? Are any settled and civilized? 725. Where are the Esquimaux? Describe them. 726. What can you say of the Southern Indians? What became of them on the Spanish conquest? What are they now? 727. What Europeans are found in Mexico and Guatemala? How many of the inhabitants are Indians and Mestizoes? 728. Is knowledge diffused in Mexico and Guatemala? Why not? 729. What is the state of the arts among them? What of the people? 730. Who settled the middle regions of North America? What language is spoken? 731. What is said of the people in this part of N. America? Of their knowledge? Of their justice and kindness?

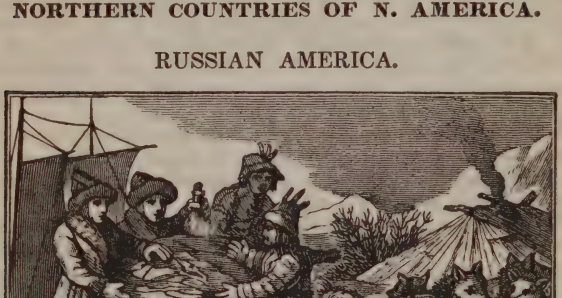
732. In the middle regions, we find most of *the African inhabitants of North America.* They are chiefly slaves, and of course are generally in a state of ignorance and degradation. *The slaves* are not permitted to read. *Many of the free* are well instructed.

733. *The settled inhabitants of North America* profess the Christian *religion. In Mexico and Central America,* none but the Roman Catholic religion is allowed. *In the United States and British Provinces,* the people are chiefly Protestants.

II. *Exercises on the Moral and Political Chart.* — What religions do you find in N. America? What countries are entirely Roman Catholic? What have both Roman Catholics and Protestants? What is the state of civilization in each? In what parts are the people Pagan? What is their state of society?

NORTHERN COUNTRIES OF N. AMERICA.

RUSSIAN AMERICA.



(81) *Russians trading with Esquimaux Indians.*

I. 734. *The Russians possess* the north-western corner of North America. *This region is chiefly inhabited* by native Indians, who acknowledge the authority of the Russians, and carry on a valuable trade in furs with their settlements, very often in sledges drawn by dogs.

I. *Questions and Exercises. Political Map of N. America.* — Where is Russian America? How is it bounded? By whom is it inhabited? (¶ 734.) What trade has it?

III. 732. Where do we find most of the Africans? What is the state of the slaves? What of the free? 733. What is the religion of the settled inhabitants of N. America? What in Mexico and Central America? What in the U. States and British Provinces?

II. 735. *The coast* is high and rocky. *It rises* into a range of mountains covered with snow and glaciers, and contains the lofty peaks of Mt. Fairweather and Mt. Elias.

736. *The climate* is much more temperate than on the eastern coast of North America. *The winters* are as mild as those of New York city; but *the summers* as cool as *those of Newfoundland.*

II. *Exercises.* — Compare the Physical and Political Maps of N. America, and mention what bays you find in Russian America. What islands on the coast? What islands extending towards Asia? What mountains are named on the map?

III. 737. *The natives* are chiefly Esquimaux, (*Es-ke-mo,*) who are in a savage state, and subsist by hunting and fishing. The Russians have established *a trading settlement* on Sitka Island.

III. *Exercises. Political Map of N. America.* — Where is the Russian settlement of New Archangel?

BRITISH AMERICA.

I. 738. *British America embraces* nearly one third of North America, extending from the Atlantic Ocean to the Pacific, and the Russian possessions, and from the Northern Ocean to the great lakes. *It may be divided* into the British provinces, which lie on the Atlantic Ocean and in the basin of the St. Lawrence, and the cold, barren region north of this basin, which is called New Britain.

NEW BRITAIN.

I. 739. *New Britain includes* the peninsula of New Labrador, East of Hudson's Bay, and the interior, South and West of this bay, which embraces the whole of the northern declivity of North America.

740. *It is inhabited* chiefly by Indians, who go upon their hunting excursions, and convey their furs, in light canoes of birch bark, or skins, which they carry from one stream to another.

I. *Questions and Exercises.* — 738. What does British America include? 739. What does N. Britain include? 740. Who inhabit it? How do they travel? *Political Map of N. America.* — Point out New Britain, and mention what it includes. (*See* ¶ 739.) Compare ¶ 739 with the map, and mention how it is bounded. Do you find any towns?

II. 741. *New Britain is* a rugged, barren region, abounding in

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II. 735. Describe the coast of Russian America. 736. The climate.

III. 737. Who are the natives? What settlement have the Russians formed?

II. 741. Describe the surface of New Britain. The climate and productions.

lakes and streams, as described in ¶ 700. *The climate* is severely cold, and *the productions* are few, as described in ¶ 719.

II. *Exercises. Physical Map of N. America.* — Point out the situation of New Britain on the Physical Map. What bay does it enclose? What islands are there on Hudson's Bay? What peninsula lies E. of it? What peninsulas and islands lie N. of it? What are the chief rivers emptying into Hudson's Bay on the E.? What on the W.? What are the chief lakes W. of the bay? What rivers empty into the Northern Ocean?

III. 742. The Indian tribes that wander over these regions, *subsist* chiefly by fishing, and by hunting the wild animals, on whose flesh they feed, and whose furs they use for clothing, or sell to the fur-traders.

743. *The tribes of the interior* are Chippewayan or Knistenaux (Nis-te-no) Indians. The only Europeans who reside here are the British fur-traders, who inhabit a few forts and factories or trading-houses belonging to the Hudson's Bay Company.

744. *Labrador and the coasts of the Northern Ocean are inhabited* by Esquimaux; and the only *settlements* are the missionary stations of the Moravians in Labrador, by whose instructions some of the natives have become Christians.

III. *Exercises. Political Map of N. America.* — Where is Labrador? What missionary stations (marked †) do you find here? Mention some of the trading-houses or factories and forts on the map, (marked *Fact.* or *Ft.*) W. of Hudson's Bay.

CANADA.

American Fall. (82) *Falls of Niagara.* *Horse-Shoe Fall.*

I. 745. *The province of Canada* lies on the great lakes and the River St. Lawrence. It was formerly divided into

III. 742. How do the Indians here subsist? 743. What tribes are there in the interior? 744. By whom is Labrador inhabited?

Upper and Lower Canada — now called Canada East and Canada West. On its borders are the *celebrated falls* of Niagara, over which the waters of the lakes pass. (¶ 394.)

I. *Questions and Exercises.* — 745. Where does Canada lie? How is it divided? What remarkable falls on its borders? *Political Map of U. States.* — How is Canada bounded on the South? (*The other boundaries are not certain.*) Where is Montreal, the present seat of government?

II. 746. Canada has every variety of *surface and soil. The borders of the lakes and of the St. Lawrence*, where most of the inhabitants reside, are very fertile.

747. *The climate* is various. *That of West Canada, near the lakes*, is temperate; but *that of East Canada* is severely cold in winter. *The summers* are every where hot; *and the plants and fruits* of the Temperate Regions flourish in most parts of this province.

II. *Exercises.* — *Political Map of U. States.* — Point out on the Political Map each of the lakes which border Canada on the South. Point out the St. Lawrence River. In what part of Canada is it? Point out the place of the Falls of Niagara? Between what lakes are they? What rivers are there in Canada N. of the St. Lawrence? What S. of it?

III. 748. *The people of East Canada* are chiefly French peasants, who are industrious, but very ignorant. *West Canada is chiefly inhabited* by British and Americans, who are better instructed.

749. *Agriculture* is not skilfully conducted, and there are few *manufactures;* but *the trade* in lumber, furs, and grain, is important.

III. *Exercises on the Political Map of U. States.* — Where is Quebec, the great seaport of Canada? What towns on the St. Lawrence, between Quebec and Lake Ontario? What towns on the lakes? What in the interior, North of the lakes? What places South of the St. Lawrence?

NEW BRUNSWICK AND NOVA SCOTIA.

I. 750. *New Brunswick and Nova Scotia occupy* the peninsula South of the Gulf of St. Lawrence.

I. *Exercises on the Political Map of U. States.* — Where are New Brunswick and Nova Scotia? How is New Brunswick bounded? What is its capital? What other towns has it, and where? How is Nova Scotia bounded? What seaport is the capital?

II. 751. New Brunswick and Nova Scotia have a rugged *surface*, almost covered with forests; but *the soil* is productive. These provinces, and the Island of Cape Breton, contain valuable *mines*, especially of coal, and gypsum, or plaster of Paris.

II. *Exercises on the Political Map of U. States.* — What rivers are there in New Brunswick, and where do they empty? What bays on its coast? What islands E. of it? What is the southern cape of Nova Scotia? What island S. of Nova Scotia?

C. II. 746. What can you say of the surface and soil of Canada? 747. Of its climate? **III.** 748. Who are the inhabitants of East Canada? West Canada? 749. How is agriculture in Canada? Manufactures? Commerce?

N. B. N. S. II. 751. What can you say of the surface of New Brunswick and Nova Scotia? Of their soil? Their mines?

III. 752. *The coast* is high and rocky, abounding in harbors. The people are much engaged in *commerce*, and the forests, mines, and fisheries, furnish valuable *exports*.

NEWFOUNDLAND.

(83) *Cod Fishery.*

I. 753. *Newfoundland* is a barren island; but *the coast* abounds in fine harbors, and *is noted for* the cod fishery, which is carried on most extensively on the Grand Bank.

I. *Qu. and Ex. Polit. Map of N. America.* — What parts of the ocean bound Newfoundland? What towns has it? In what direction from it is the Grand Bank? For what is it remarkable? (¶ 753.)

II. 754. *The interior* is hilly, uninhabited, and almost unknown. *The climate* is cold in winter, and foggy and chilly, even in summer; and this island will not *produce* grain.

MIDDLE REGIONS OF N. AMERICA.

UNITED STATES OF AMERICA.

I. 755. *The United States occupy* the middle regions of North America. They embrace its most *fertile* portions, and enjoy very great advantages for foreign and inland *commerce*. Their situation, great divisions, and government, have been already described, (p. 75–81.)

III. 752. How is the coast? What is said of commerce? Of exports?
N. I. 753. What is the soil of Newfoundland? Its coast? 754. How is the interior? What is the climate of this island? Does it produce grain?

I. *Questions.* 755. What part of N. America do the United States occupy? What is the extent of the United States territory compared with Europe? (See p. 75, ¶ 211.) What can you say of its coast? (¶ 213.) What of its rivers? (¶ 214.) What part is occupied by white men? (p. 76, ¶ 215.) What by Indians? (¶ 215.) How many provinces were there formerly here? (¶ 216.) How many states are there now? (¶ 217.) What is remarkable about their boundaries? (¶ 218.)

How are the United States divided according to climate and productions? (¶ 219.) Where are the grain states? (¶ 220.) The cotton states? (¶ 221.) What is the form of each division? (¶ 220–21.) How may the grain states be subdivided? (p. 78, ¶ 223.) The cotton states? (p. 80, ¶ 227.) What is there of the territories occupied by Indians? (¶ 229.)

What kind of government is that of the United States? (p. 81, ¶ 230.) What is a federal republic? (p. 70, ¶ 194.) Of what do the United States consist? (¶ 230.) What is the government of each state? (p. 82, ¶ 237.) How is each state divided? (¶ 238.)

II. By whom are the laws of the United States made? (p. 81, ¶ 233.) By whom are they executed? (¶ 234.) Who assist the President, and what are they called? (¶ 234.) By whom are judges appointed, and what is their duty? (¶ 235.) What is Washington called, and why? (¶ 236.)

I. 756. *The chief physical divisions of the United States,* as already described, are the western declivity, on the Pacific Ocean; the eastern declivity, on the Atlantic; and the basin of the Mississippi, which lies between them. The northern part of the United States includes a portion of the basin of the St. Lawrence. (¶ 691.)

I. *Questions and Exercises.*—756. What are the chief physical divisions of the United States? Point out, on the *Political Map of the U. States,* the eastern declivity of N. America. The basin of the Mississippi. What states lie on the eastern declivity, E. of New York? What states on this declivity, S. of N. York? Which of the states, S. of New York, extend over the mountains into the basin of the Mississippi? What states lie in the basin of the Mississippi? What states lie on the lakes and the St. Lawrence River, or partly in the basin of the St. Lawrence? Which of the states in these basins lie N. of latitude 36½°? Which S. of latitude 36½°? What territory lies on the western declivity of the United States?

II. *Questions.*—Review the pages from p. 157 to 159, and answer the following questions: What is known of the western declivity of the United States? (p. 157, ¶ 679.) What of the basin of the Columbia River? (¶ 680.) Describe the eastern terrace of the Chippewan Mountains. (p. 158, ¶ 688.) The western terrace of the Apalachian Mountains. (¶ 689.)

What is the general surface of the basin of the Mississippi? (p. 158, ¶ 685.) Its soil? (¶ 690.) Of the lowland of the Gulf of Mexico? (¶ 690.) Of the lowland of the Atlantic declivity? (¶ 696.) Of the Atlantic terrace East of the Hudson River? (¶ 697.) What is the character of this terrace South of the Hudson River? (¶ 698.)

I. EXERCISES ON SITUATION.

Study the situation and shape of every gulf, bay, peninsula, cape, island, river, and lake, on the Physical Map of the United States, until you can point it out on the Political Map; and answer these questions.

GULFS, PENINSULAS, &c.

Gulfs, Bays, and Sounds. — Near what state or states, and in what direction, is the Gulf of Mexico? G. of St. Lawrence? Bay of Fundy? Penobscot Bay? Massachusetts B.? Narragansett B.? Long I. Sound? N. York B.? Delaware B.? Chesapeake B.? Albemarle S.? Pamlico S.?

Peninsulas. — How, or between what waters, are the following peninsulas situated? C. Cod? New Jersey? The peninsula comprising Delaware, and a part of Maryland and Virginia? Florida? Michigan?

Capes. — In what state, and in what part of it, is C. Ann? C. Cod? C. Malabar? Montauk Point? Sandy Hook? C. May? C. Henlopen? C. Charles? C. Henry? C. Hatteras? C. Lookout? C. Fear? C. Florida? C. Sable? C. Roman? C. Orford? C. Adams?

Islands. — Where is Long Island? Nantucket? Martha's Vineyard? Block I.? Key West, in lat. $24\frac{1}{2}°$?

RIVERS, LAKES, AND MOUNTAINS.

Rivers. — What state is bordered by the St. Lawrence R.? What by the St. John's R., which is near the St. Lawrence? Through or between what states do the following rivers flow? — Mississippi? *Its branches*, viz., Ohio; Missouri; Arkansas; Red R.; Kaskaskia; Illinois; Wisconsin? On which side of the Mississippi are the Yellowstone R.? Platte R.? R. Kanzas? Where is the Columbia R.? (Name the principal branches.) Penobscot? Kennebec? (Name the branch.) Connecticut? Hudson? (Name its branch.) Delaware? Susquehannah? (Name its branches.) Potomac? (Name its branch.) Rappahannock? James? (Name its branch.) Roanoke? Pamlico, Neuse, and C. Fear? Pedee? Santee? (Name its branches.) Savannah? Ogechee? Altamaha? (Name its branches.) St. Mary's? St. John's? Apalachicola? (Name the branches.) Mobile? (Name its branches.) Sabine? Trinity? Brazos? Colorado? Del Norte?

Where are the following branches of the Ohio, viz.: Tennessee? Cumberland? Green? Kentucky? Licking? Great and Little Kanhawa? Monongahela? Allegany? Muskingum? Scioto? Miami? Wabash?

Lakes. — What states are bordered by L. Superior? What by L. Huron? L. St. Clair? L. Michigan? L. Erie? L. Ontario? L. Champlain? In what state are the Lakes Borgne and Pontchartrain?

Mountains. — Where are the Apalachian Mountains? Through what states do these ranges pass? Where are the Green Mountains? The White Mountains? Cumberland? Chippewan? Long's Peak? Spanish Peak? The Black Hills? The Ozark Mts.?

II. *Relative Situations, or Courses and Bearings.* — What is the course from Washington to the following places? — Baltimore, Philadelphia, New York, and Boston? To New Orleans? To Cincinnati, St. Louis, and Jefferson City? To Harrisburg? To Richmond? To Raleigh and Charleston?

To Detroit? Which way from New York to Albany and Montreal? From Boston to Quebec? From Boston to Albany, Buffalo, and Detroit? From Philadelphia to Columbia, Indianapolis, and Springfield? On or near what parallel of latitude are these four places?

In what town and state do you live? Find the town, or the nearest large town, on the map. Tell now in what direction each state and capital is from it, beginning at Maine.

II. ATLANTIC LOWLAND AND TERRACE.

757. *The Atlantic lowland* commences at the mouth of the Hudson River, and *extends* South through the states of New Jersey, Delaware, Maryland, and Virginia.

758. It widens *towards the South*, until it covers one third of the states of North and South Carolina, and Georgia; and is *continued* in the lowland of the Gulf of Mexico, through the states of Alabama, Mississippi, and Louisiana.

759. *The lowland contains* a large proportion of sands and swamps *on the Atlantic coast*, (as stated in p. 98, ¶ 292, and p. 99, ¶ 294;) but *on the Gulf of Mexico*, it is very fertile.

760. *This lowland is bordered on the land side* by a rocky ledge, which forms the step to the Atlantic terrace. *The ledge may be traced* by the falls of the rivers in descending from the terrace to the lowland, and by the towns which have been built at the head of ship or sloop navigation.

761. *East of the Hudson River, this ledge* becomes, to a great extent, the coast of the sea, which is generally high and rocky.

762. *The Atlantic terrace, East of the Hudson River, embraces* the rugged states of New England.

763. *South of the Hudson River, the terrace is* the most fertile portion of the Atlantic States. *It forms* the "middle country" of the Southern States, both on the Atlantic, and on the Gulf of Mexico, where the same terrace is continued.

XI. *Exercises on the Physical and Political Maps of the United States.* — Through what states does the Atlantic lowland extend, in passing along the coast from the city of New York to the Sabine River? Compare the Physical and Political Maps of the United States, and mention the situation of the following towns, which mark the course of the rocky ledge (¶ 760) from New York to N. Carolina: Trenton — Baltimore — Washington — Fredericksburg — Richmond — and Petersburg. (*Map N. Div.*) From N. Carolina to Alabama: Halifax — Tarboro — Fayetteville — Camden — Columbia — Augusta — Milledgeville — and Macon. (*Map S. Div.*)

II. A. L. T. 757. Where does the Atlantic lowland commence? 758. Describe it in its course towards the South. 759. How are the lowlands on the Atlantic coast? How on the Gulf of Mexico? 760. How are these lowlands bordered on the land side? How can you trace the rocky ledge which bounds them? 761. What is this ledge, E. of the Hudson River? 762. How is the Atlantic terrace E. of the Hudson River? 763. How is it South of the Hudson? What does it form?

II. APALACHIAN MOUNTAINS AND TABLE LAND.

764. *The most eastern range of the Apalachian Mountains* is the Blue Ridge, which extends from the head waters of the streams which empty into the Gulf of Mexico, to the Gulf of St. Lawrence.

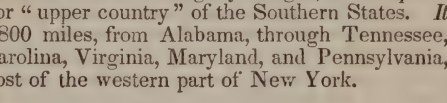
765. *As far North as the Hudson, its course* is North-East. *Here it turns* North, along the borders of Massachusetts, under the name of the Taghonnuc Mountains.

766. In Vermont, it forms the range of the Green Mountains; and then turns North-East again, to form the water-shed between the St. Lawrence and St. John's River.

767. *The most western and loftiest range of the Apalachian Mountains*, is the Allegany Ridge. *It extends* through the states of Pennsylvania and Virginia, and spreads into separate ranges and table lands at the North and South.

768. Between the Blue and the Allegany Ridges, is *the Apalachian Table Land*, or "upper country" of the Southern States. *It extends* more than 800 miles, from Alabama, through Tennessee, North and South Carolina, Virginia, Maryland, and Pennsylvania, and spreads over most of the western part of New York.

The profile (84) shows the ascent and descent of the land in passing from the Atlantic Ocean over the Apalachian Mountains. The letters are the initials of the names; as, B. R. Blue Ridge. (*See* p. 101.)



(84) *Profile of the Apalachian Mts.*

769. *In western New York, the surface of this table land* is from 600 to 800 feet above the sea; but *towards the South, it rises* to the height of 1000 and 2000 feet.

770. It has generally a fertile *soil*, and a *climate* favorable to all the productions of the Temperate Regions, even in the Southern States. *Its wheat fields* are the richest granary of our country.

771. *The Apalachian Table Land is crossed* by many ranges of mountains. Several of these form *one connected chain*, which was called, by the Indians, the Katatin, or Endless Mountains.

772. *The Katatin Mountains* extend, under various names, from

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II. A. M. T. 764. What is the most eastern range of the Apalachian Mts.? 765. What is its course to the Hudson? How does it turn here, and under what name? 766. What name does it take in Vermont? 767. What is the most western range of the Apalachian Mts.? What can you say of its height? How far does it extend? 768. Where is the Apalachian table land? What is it called at the South? How far does it extend? 769. How high is the surface of the table land in New York? How high towards the South? 770. What are its soil and climate? What can you say of its wheat fields? 771. Are there any mountains on the table land? What chain do some of them form? 772. How far do the Katatin Mountains extend?

the state of New York to Alabama, where they terminate in the border mountains between North Carolina and Tennessee.

773. Near the northern extremity of the Katatin Mountains are the *Catskill Mountains* of New York, running North across the falls of the Mohawk River. *Here they divide* into two branches, running North-East and North-West, and separating the waters of the Hudson River from those of the St. Lawrence.

774. *The White Mountains* are an outlying range on the northern part of the Atlantic terrace. They contain the loftiest *peaks* of this region; but these appear to be inferior in height to the Black and Roan Mountains of the Blue Ridge, at the southern extremity of the Apalachian chain.

Mt. Washington, the highest peak of the White Mountains, is 6226 feet above the sea. The Black Mountain is said to be 6746 feet, and the Roan Mountain 6033 feet in height, — both in N. Carolina.

What is the most eastern ridge of the Apalachian Mountains, which borders the terrace on the land side? What is its course from Alabama and Georgia to the Hudson River? What course does the Blue Ridge take here? What new names has it in Vermont? What course does this range take, E. of the sources of the Connecticut River?

What is the most western ridge of the Apalachian Mountains? What table land lies between the Blue Ridge and the Allegany Mountains? (¶ 758.) What range of mountains traverses this table land?

II. CREST AND PASSES OF THE APALACHIAN MOUNTAINS.

775. *The crest of the Apalachian Mountains* is not generally more than 2000 feet above the sea. It descends from *the loftiest points*, at the North and South, towards the valleys of the Hudson and Delaware Rivers; and there *it is lowest*.

776. *The Blue Ridge is the water-shed between* the streams of the Atlantic Ocean and those of the Mississippi and St. Lawrence, *except* in Virginia and Pennsylvania. *In these states*, the rivers rise in the Allegany Ridge, and find passage through the other ranges.

777. The Apalachian Mountains have numerous *passes*, easily traversed. *They are high enough* to separate the Eastern from the Western States, and to supply both with pure streams of water; but they are so gradual in their ascent, that they are crossed by *roads*, *railways*, and *canals*, and do not interrupt the intercourse between these states.

778. They abound in *valuable minerals*, especially in iron and coal. *These are easily obtained*, and are also *easily transported* by

II. Where do they terminate? 773. Where are the Catskill Mountains? Where and how do they divide? 774. What can you say of the White Mts.? How do they compare in height with other mountains of this region? Are there any higher on the Apalachian Chain? **O. P. A. M.** 775. How high is the crest of the Apalachian Mts.? Where are the loftiest points? Where is it lowest? 776. What range is the water-shed between the streams of the Atlantic and the Mississippi? What in Pennsylvania and Virginia? 777. Have the Apalachian Mts. many passes? What can you say of their height? How do they admit of roads, railways, and canals? 778. Have they any valuable minerals? Are these easily obtained and transported?

means of the streams and canals which connect the mines with the surrounding states and the ocean.

II. *Exercises on the Map of the S. Division of the U. S.* — What streams rise from the Apalachian Mountains, and empty into the Gulf of Mexico? What streams rise from the Blue Ridge South of Virginia? (*Map N. Div.*) Where do the streams of Virginia and Pennsylvania rise, which empty into the Atlantic Ocean and its bays? (*Map of Eastern States.*) What is the water-shed between the rivers of New England, which flow into the Atlantic Ocean, and those which flow into the St. Lawrence and the Lakes? Where are the White Mountains?

II. WESTERN TERRACE OF THE APALACHIAN MOUNTAINS.

779. *The western terrace of the Apalachian Mountains* embraces the north-eastern part of the basin of the Mississippi, and the neighboring regions of the basin of the St. Lawrence. *It extends* from the state of New York to Tennessee, and contains the states lying on the Ohio River.

780. *It is crossed* by the Cumberland Mountains in Tennessee, and the Laurel and Chestnut Ridges in Pennsylvania. But *it is generally* a waving country; and in the states north-west of the Ohio River, it spreads into vast *prairies*.

781. *It is watered* by numerous streams, and surpasses almost every other part of the United States in the fertility of its *soil* and the richness of its crops.

782. This terrace *contains immense beds* of coal, and abounds with salt and gypsum, which promise inexhaustible supplies for the Western States. *Its lead mines*, near the Mississippi River, exceed most others in the world in richness; and copper is abundant on *Lake Superior*.

II. *Exercises on the Map of the N. Division U. S.* — What great branch of the Mississippi River runs from the E. through the western terrace of the Apalachian Mountains? In what states are the principal sources and upper branches of the Ohio River? What states lie upon this terrace, bordering on the Ohio River?

783. Those parts of the United States which lie in the *basin of the St. Lawrence*, as well as those on the Ohio River, form a part of the western terrace.

784. *The basin of the Mississippi consists* of this terrace and the lowlands of the Gulf of Mexico, already described, (¶ 759,) together with similar regions beyond the Mississippi, which appear to be less fertile.

785. *The valleys of the streams* are generally the most fertile

II. W. T. 779. What is said of the western terrace of the Apalachian Mountains? What states does it embrace? 780. What mountains cross it? What is its general appearance? How is it north-west of the Ohio River? 781. How is it as to water and soil? 782. What minerals does it contain? What can you say of its lead mines? 783. What parts of the United States besides those on the Ohio River belong to this terrace? 784. Of what does the basin of the Mississippi consist? How are the regions beyond the Mississippi? 785. What is said of the valleys of the streams?

tracts; but *the lower course and the delta of the Mississippi are bordered by* extensive swamps and cane-brakes, which cannot be cultivated or inhabited.

XI. *Exercises on the Political Map of the United States.* — What states and parts of states are there whose streams empty into the St. Lawrence and the Lakes? (*These regions of course lie in the basin of the St. Lawrence.*) On what terrace are they? (¶ 783.) Name the streams, beginning at the E. In what two states S. of Ohio do all the streams empty into the Ohio and Mississippi Rivers? What streams empty into the Gulf of Mexico on each side of the Mississippi? (*The highlands at the head of these streams show where the declivity of the Gulf of Mexico begins, and where the western terrace* (¶ 779) *terminates.*)

XI. DECLIVITIES OF THE CHIPPEWAN MOUNTAINS.

786. *The eastern terrace of the Chippewan Mountains lies* West of the states of Missouri and Arkansas. *It is generally* a region of steppes and deserts. *It is only fitted* to pasture the herds of buffaloes and wild horses which range over it; and *is habitable* only for wandering hunters, or herdsmen. The western declivity of these mountains has been already described. (¶ 679-680.)

Exercises on the Physical Map of the United States. — What are some of the largest streams on the eastern terrace of the Chippewan Mts.? Which way do they flow? What mountains separate these from the Trinity R. and other smaller streams flowing into the Gulf of Mexico? (*These highlands show the commencement of the declivity of the Gulf of Mexico W. of the Mississippi R.*)

Rivers. — What are the six principal rivers emptying into the Atlantic, E. of the Hudson? Which is the largest? What is the course of the Connecticut River, where does it empty, and what is its rank as to size? Describe, in the same manner, the other five principal rivers E. of the Hudson.

Describe, in the same way, the Hudson River and its principal branch. Describe the two large rivers next S. of the Hudson, and their branches. What is the general course of the rivers which have been described? What is the general course of the rivers which empty into the Atlantic, S. of the Susquehannah? What rivers empty into Chesapeake Bay, and on which side? What considerable branch has the Potomac?

Describe the rivers emptying into Albemarle Sound. Describe those emptying into Pamlico Sound. What rivers are found between these and Savannah River? Describe their source, rank, and branches. Describe the Savannah, and the rivers S. of it emptying into the Atlantic. What are the principal rivers of Florida? What branches form the Apalachicola? Mention the eastern and western branches of the Mobile River, which empties at the town of Mobile. What two rivers between the Mobile and the Mississippi, S. of the Ohio? What two rivers form the Ohio, and where do they rise? Describe the principal branches of the Ohio on the southern side, beginning at the mouth. Describe those on the northern side. What branches has the Mississippi, N. of the Ohio?

XI. Of the lower course and delta of the Mississippi? **D. C. M.** 786 Where is the eastern terrace of the Chippewan Mountains? What is the face of the country and soil? How is it inhabited? What can you say of the western declivity of the Chippewan Mountains? (*See* ¶ 679, 680.)

What are the three largest western branches of the Mississippi? What N. of the Missouri? What rivers between the Missouri and Arkansas R.? Describe the sources and course of the Missouri. Describe its principal branches. What lakes near the mountains?

What river forms the south-western boundary of the United States? What rivers between the Rio del Norte and the Sabine? Where do they rise, and what is their general course? Which is the largest? Describe the source, course, mouth, and rank of each. Describe the Rio del Norte.

What large river empties into the Pacific from the United States? What two branches of the Columbia rise near the Missouri?

Lakes. — What is the most western of the great chain of lakes N. of the United States? What islands does it contain? What straits connect it with L. Huron? What lakes near the mouth of the Mississippi?

Where is Lake Michigan, and with what lake does it communicate? What lake between Huron and Erie? What river empties into it? What rivers empty into Lake Erie, and from what state? What river between Erie and Ontario? What rivers empty into Lake Ontario? What lake E. of Ontario, and how is it connected with the St. Lawrence? What small lake is connected with this?

Map of Eastern States. — What small lake E. of Champlain, and what river passes from it? What lakes in New Hampshire? What in Maine? *

II. NAVIGATION.

787. The United States possess *advantages for foreign and inland commerce*, greater than those of most other parts of North America.

788. *The eastern coast*, from the Bay of Fundy to Chesapeake Bay, abounds in bays, sounds, and harbors, which render the states bordering upon them the most commercial in the Union.

789. *The rivers of this region* are also navigable, as far as the tides reach, for vessels of considerable size; and in the Hudson River, and those South of it, ships can ascend from 100 to 200 miles into the interior.

790. *The eastern coast, from Chesapeake Bay to Florida*, is low and sandy; the sounds and rivers are obstructed by shoals and bars; and there are few harbors which can receive large ships.

Hence *the Southern States* are least engaged in foreign commerce; and most of their trade is carried on by the vessels of the Northern States.

791. *The mouths of the rivers on the Gulf of Mexico* serve as harbors for large ships; and *New Orleans, at the mouth of the Mississippi*, is the centre of trade, from all parts of the world, to the great basin of this river.

II. *Exercises on the Maps of the United States. Eastern States.* —

II. N. 787. What is said of the advantages of the United States for commerce? 788. What of the eastern coast? 789. Of the rivers of this region? 790. How is the coast from the Chesapeake Bay to Florida? Which states, then, have the least foreign commerce? How is most of their trade carried on? 791. What is said of the mouths of the rivers on the Gulf of Mexico? Of the Mississippi?

* The teacher may pursue the examination more in detail, if he thinks proper, on the maps of the divisions of the United States.

What bays and sounds do you find, from the Bay of Fundy to the Hudson River? — *Northern Division.* What bays from the Hudson River to Chesapeake Bay? What large rivers empty into Chesapeake Bay? — *Southern Division.* Are there any open bays South of Chesapeake Bay? What sounds are there? How obstructed? (¶ 790.) What rivers of the Gulf of Mexico have towns or ports at their mouths? (¶ 791.)

792. The United States are not less favored in regard to *inland navigation*, as described in part under the head of North America, (pp. 162, 163.)

793. *The streams of the Atlantic declivity* are navigable for boats, with the aid of canals around the falls, nearly to their sources; except in Maine and New Hampshire.

794. *The rivers of the Gulf of Mexico* can be navigated by steamers, through a large part of their course.

795. *The Mississippi* can be navigated by steamers — by the Missouri for 2000 miles, and by the Ohio to Pittsburg. Its numerous branches extend inland navigation to every part of its basin.

796. *The passes of the Apalachian Mountains*, and the watershed which separates the basin of the Mississippi from that of the St. Lawrence, are not very high. *Canals* have therefore been cut, *connecting the Mississippi* with the lakes, and with the streams of the Atlantic declivity.

797. Several *canals* are commenced, and one completed, *connecting the Ohio River with* Lake Erie. *The Pennsylvania Canal and Railway*, from Philadelphia to Pittsburg, connect the Ohio with the Delaware River, and *the Chesapeake and Ohio Canal* with the Potomac River and Chesapeake Bay.

798. *The Erie Canal* of New York connects the Hudson River with Lake Erie; and *the Champlain Canal* opens a boat navigation to Lake Champlain and the St. Lawrence River.

799. *A chain of canals* also connects New York harbor with the Delaware and Chesapeake Bays, and Albemarle Sound. *This furnishes* inland navigation along the coast, from Rhode Island, and the southern part of Massachusetts, to North Carolina.

800. *A chain of railways* furnishes more rapid means of conveyance for passengers, and valuable articles of commerce, from Maine to Georgia.

801. A number of *smaller canals and railways* have been con-

II. 792. How are the United States as to inland navigation? 793. What is said of the streams of the Atlantic declivity? 794. Of the rivers of the Gulf of Mexico? 795. Of the Mississippi? Its branches? 796. Of the passes of the Apalachian Mountains? How is the Mississippi connected with the lakes and streams of the Atlantic declivity? 797. What canals connect the Ohio River with Lake Erie? What one with the Delaware? With the Potomac and Chesapeake Bay? 798. What canal connects Lake Erie with the Hudson River? The Hudson with Lake Champlain and the St. Lawrence River? 799. How is New York harbor connected with the Delaware and Chesapeake Bays, and Albemarle Sound? What inland navigation does this furnish? 800. What chain of railways is there? 801. Are there other canals and railways in the United States?

structed, which give the advantages of inland commerce to almost every part of the United States.

Exercises on the Map of the N. Division of U. S. — From what city on the Hudson R. does the Erie Canal pass? What place lies at its entrance into Lake Erie? Mention some of the places which lie upon it. Trace the course of the Pennsylvania Canal and Railway in the same manner. Of the Chesapeake and Ohio Canal. Of the canal from Ohio to Cleveland, on Lake Erie. Of the canals from New York harbor to North Carolina.

II. CLIMATE AND PRODUCTIONS.

802. A general account of *the climate and productions of the United States* has already been given under the head of North America, which may be reviewed in this place in connection with the Chart of Climates, as in the following exercises.

Chart of Climates. — In what regions do you find the United States on the Chart of Climates? What productions may we expect in the northern parts? (¶ 512, p. 132.) What in the southern parts? (¶ 510.) Does any part extend into the Hot Regions? What productions do we find there? (*See* p. 130, ¶ 509.) How far do the Warm Regions extend in the United States? (¶ 715.) How does the temperature of the United States compare with that of Europe in the same latitude? (¶ 716.) What parts do the Temperate Regions embrace? (¶ 717.)

803. *In the temperate or grain states, the climate* varies with the situation and height of the land.

804. *The climate of the inland regions* in the grain states is continental, (*see* ¶ 480,) with hot summers and severe winters. The change from winter to summer is so sudden, that there is scarcely any spring.

805. *On the coast of the sea and the great lakes*, the climate is much milder. *The winters* are as mild as in places farther South; and *the summers* are cooler than in any part of the interior.

806. *The table land of Virginia and Maryland* enjoys a pleasant temperature in summer, while the lowlands are scorched with heat.

807. *The grain states* yield all the crops and fruits of the Temperate Regions, except in some districts at the North, where wheat and the more delicate fruits will not grow.

808. *In the lowland and terrace of the cotton states*, snow is very rare; *the winters* resemble a northern spring; and *the summers* are intensely hot, especially in the interior.

809. *In these districts*, rice, cotton, figs, and many other *plants* of the Warm Regions flourish; but the olive has not been cultivated, and the oranges are not of a good quality.

II. C. P. 802. Where do you find an account of the climate of the United States? 803. How is the climate in the grain states? 804. How is the climate of the inland regions? What is said of the change from winter to summer? 805. What is the climate on the coast of the sea and the lakes? How are the winters and summers? 806. What is said of the table land of Virginia and Maryland? Of the lowlands? 807. Of the grain states? Which are they? (¶ 220.) 808. Of the warm or cotton states? Which are they? (¶ 221.) 809. What plants flourish there?

810. *The Apalachian table land*, in the cotton states, enjoys a mild and uniform climate, and produces the fruits and plants of the Temperate Region.

811. *The Hot Region* on the Gulf of Mexico yields the sugar-cane, coffee, and other fruits of this region.

812. Like other parts of North America, the United States have a very variable *climate;* and *the changes* from day to night, and during the day, are greater than in most other countries in the same latitude.

III. INHABITANTS.

813. *The United States were originally inhabited* by Indian tribes, which have nearly all wasted away, or removed to the regions West of the Mississippi River, except a small number in New England and New York.

814. *The original states were settled* chiefly by English, Scotch, and Irish emigrants; but great numbers of Germans, and other Europeans, have since entered the country; and there are 2,500,000 African slaves.

815. *In the states North and East of Maryland*, common schools are established, and nearly all the inhabitants are taught to read, and are familiar with the Bible.

816. *In these states the people* are industrious. *Agriculture* is carefully attended to, though with far less skill than in Europe. *Manufactures* are extensive and important; and the inhabitants of the coast are actively engaged in *the fisheries*, and in *commerce* with every part of the world.

817. *In the states North of the Ohio*, the condition of the people is similar to that of the North Eastern States; but they are not yet so generally instructed. *Manufactures* are only beginning to flourish.

818. *The rivers and canals of the West* are crowded with boats and steamers, conveying its produce to the Eastern and Southern States.

819. *In the states South of Pennsylvania and the Ohio River, the white inhabitants of the lowlands* are generally planters; that is, they own *plantations*, which are *cultivated by* slaves of the African race. *In the highlands*, the white inhabitants are chiefly farmers, and there are few slaves.

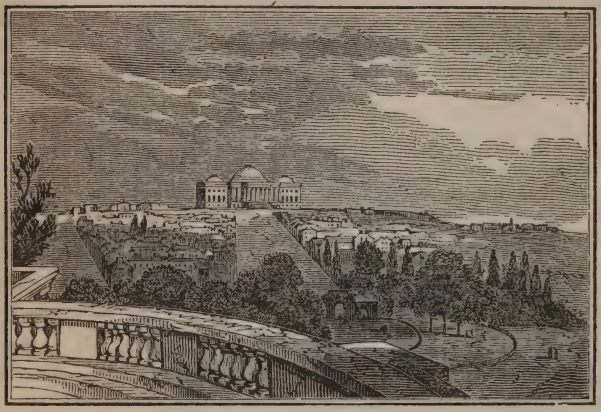
820. *In these states the land* is not generally well *cultivated;* but *the products* are rich. In the states South of Virginia, there are few *manufactures* except in families; and their *commerce* is carried on chiefly by the ships and merchants of the Northern States.

II. 810. Of the Apalachian table land in these states? 811. Where is the Hot Region? What are its productions? 812. What can you say of the climate in the United States, compared with countries in the same latitude? Why is it variable? (*See* ¶ 721.)

I. III. 813. Who originally inhabited the United States? Where are they now? 814. By whom were the states settled? How many African slaves are there? 815. What can you say of the people North and East of Maryland? 816. Of their industry, agriculture, manufactures? What part of them carry on fisheries and commerce? 817. What is their condition in states North of the Ohio? 818. What is said of the rivers and canals of the West? 819. What states have planters and slaves? What is said of the planters? Of the slaves? 820. How is agriculture here? Manufactures? Commerce?

SEAT OF GOVERNMENT OF THE UNITED STATES.

DISTRICT OF COLUMBIA.



(85) *View of Washington.*

I. 821. *The District of Columbia* is a small tract of land lying East of the Potomac River. It belongs to, and is governed by the United States, and is the residence of its principal officers.

822. *Washington* is the capital of the United States, and contains the Capitol, or building in which Congress meet, the President's House, and the central public offices of the United States.

I. *Map of the D. of Columbia.* (*See Polit. Map of U. States.*)—On what river does the District of Columbia lie? What state incloses it on three sides? What river bounds it on the West? What is its capital? What other city in the District?

II. 823. The District of Columbia has a waving *surface*, and a barren *soil;* but its *situation* is fine, and its *climate* healthy.*

III. 824. This District was formerly ten miles square, having been ceded to the United States by Maryland and Virginia, but in 1846, the part once belonging to Virginia, was retroceded to that state.

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* As the questions on the description of each country would be merely a repetition of the words in *Italic letters*, as *Surface, Soil, Climate*, &c., and almost the same in every instance, they will be omitted hereafter.

825. *It is chiefly occupied* by cities. *The inhabitants of Georgetown* are engaged in commerce, and large vessels come up the Potomac to the U. S. Navy-Yard. *Washington is the seat* of the public business of the United States; *the residence* of the public officers and foreign ambassadors; and, during half the year, of the members of Congress, the judges of the Supreme Court, and many other distinguished men.

I. *Polit. Map of U. States, and Map* 57, p. 79. Which are the states whose chief productions are grass and grain? (*See* ¶ 220, p. 77.) Which of these states lie E. of the Hudson River? How are the Eastern States bounded?

EASTERN, OR NEW ENGLAND STATES.

MAINE.

(86) *Lumber Vessel on the Coast of Maine.*

I. 826. *Maine* is the largest state in New England, but the last settled, and the most thinly inhabited. *The greater part of it* is still covered with forests; and lumber is *the chief export*, which the people convey to other countries, in their own ships.

I. *Map of E. States.*—How is Maine bounded? What is its capital, and where? What can you say of Maine? (¶ 826.) What is its chief export?

II. 827. Maine has a high rocky *coast*, indented with numerous bays and harbors. *The surface* is rugged, and in some parts mountainous; and it abounds in *lakes*, and in *rivers* which are generally too rapid for navigation.

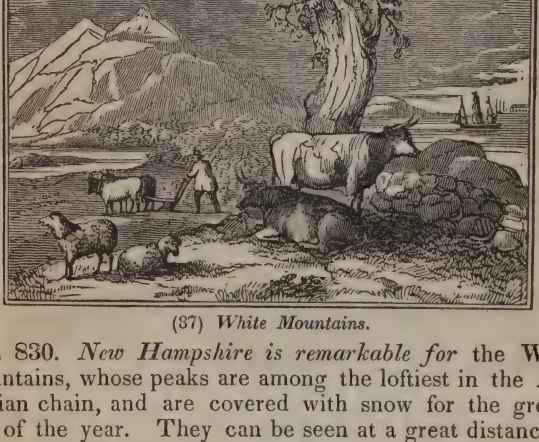
828. *The soil* is productive in the interior. *The climate* is cold; and it is better adapted to pasturage than tillage.

II. * What mountains are there in Maine? Mention the rivers in their order, beginning at the East. What is the rank of each? What lakes? Are there any bays and islands on the coast of Maine?

III. 829. *Manufactures* are few; but Maine is among the first states in the Union for *shipping*. Some of its vessels are employed in conveying ice to hot countries.

III. What seaports do you find on the coast? Where is Eastport? What towns on the Penobscot River? What on the Kennebec? On the Androscoggin?

NEW HAMPSHIRE.



(37) *White Mountains.*

I. 830. *New Hampshire is remarkable for* the White Mountains, whose peaks are among the loftiest in the Apalachian chain, and are covered with snow for the greater part of the year. They can be seen at a great distance on the ocean.

I. *Map of E. States.* — How is New Hampshire bounded? What is its capital? What river rises in the N., and bounds it on the W.? For what is New Hampshire remarkable? (¶ 830.)

II. 831. *New Hampshire* is level *on the coast;* but the interior is a rugged mountain land, abounding in lakes.

832. The soil of New Hampshire is productive in some parts; but this *state is best fitted* for pasturage, and a large part of it is still covered with *forests.* It abounds in valuable *mines* and *quarries.*

* In the exercises on the maps for the United States, the student should generally consult the map of that division which contains the state; as, for Maine, &c., the map of the Eastern Division; for New York, &c., that of the Northern Division; and for North Carolina and the following states, that of the Southern Division of the United States.

II. Where are the White Mts.? What rivers flow from these mountains, and in what states do they empty? What large lake in New Hampshire?

III. 833. *Its manufactures* are increasing; but *its sea-coast and commerce* are limited. The products of its dairies, forests, mines, and quarries, are *its chief exports.*

III. What seaports are marked in New Hampshire? Where does the Merrimack River empty? What towns upon it? What towns on the Connecticut River?

VERMONT.

(88) *Raft on Lake Champlain.*

I. 834. *Vermont* is the only state of New England which does not touch upon the sea; but *it is bordered* by Lake Champlain, on which its lumber is *exported*, on rafts, to the St. Lawrence and the Hudson Rivers.

I. *Map of E. S.* — How is Vermont bounded? What river on the E.? What lake on the W.? What is the capital? Does Vermont touch upon the sea? (¶ 834.) How are its products exported?

II. 835. *Vermont is traversed* by the Green Mountains, which give it a mountainous and rugged *surface.* It has two *declivities*; one whose streams are connected with Lake Champlain, while those of the other flow into the Connecticut River.

836. *Its soil* is productive and well watered. *Its climate* is that of the interior, already described, (¶ 804,) severe in winter and hot in summer. It contains valuable *mines* and *quarries* of marble.

II. What mountains pass through Vermont? What rivers empty into L. Champlain? What lake on the northern boundary? What river flows from L. Champlain into the St. Lawrence?

III. 837. The people of Vermont are more engaged in *pasturage*

especially of sheep, than in *tillage*. *Manufactures* are chiefly in families. *The chief exports* are the products of its forests, mines, and dairies, which are sent abroad, in boats, by the lake and river that bound it.

III. What towns on Lake Champlain? What on Otter Creek? What towns on Connecticut River? What town in the south-western corner? (*Bennington is celebrated for a battle in the Revolution.*)

MASSACHUSETTS.

(89) *Boston.*

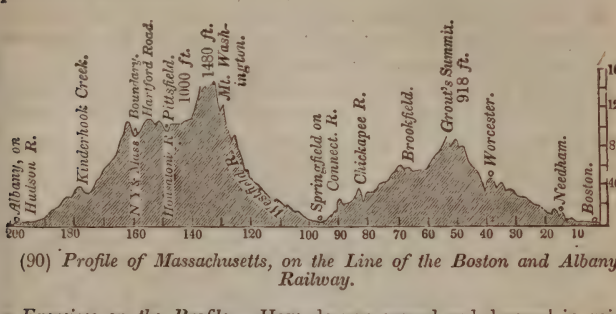
I. 838. *Massachusetts* is the oldest and most thickly settled state in the Union. Boston, its capital, is the largest and most commercial city in New England. *It is situated* on a peninsula, approached, on all sides but one, by means of bridges; and *is remarkable* for the State House, in which the legislature meet, overlooking a beautiful square called the Common, and for the neighboring monument of the battle on Bunker Hill.

I. *Map of E. S.* — How is Massachusetts bounded? What is its capital? How is it situated? (¶ 838.) For what is it remarkable?

II. 839. *The surface* of Massachusetts is generally rough and irregular. *The only level portions* are in the valley of the Connecticut River, and on a part of the coast. But *its soil* is productive, and in the river-valleys very fertile. *The climate* is damp and chilly on the coast, but dry and healthy in the interior.

840. *Massachusetts is crossed* by two ranges of highlands, as

represented in the following profile; and *its western counties* lie in part on a table land.



(90) *Profile of Massachusetts, on the Line of the Boston and Albany Railway.*

Exercises on the Profile. — How do you ascend and descend in going from Boston to Albany? What places do you pass? What is the lowest point? Which is the highest? How high is the highest point between Boston and the Connecticut R.? How high is Worcester above the level of the sea? (*See the scale of feet on the right hand, of which each division is 200 feet.*) How high is Brookfield? Which is the highest town on the profile? Which part of the state appears to be a table land?

NOTE. — It will be a profitable exercise to examine and describe all profiles in the same manner; and to compare the profiles with the map, in order to ascertain the situation of places and the elevation of different parts of a country.

II. What rivers are there in Massachusetts? What mountains are there in the western part? What other mountains do you find? What bays E. of Massachusetts? What capes? What islands S-E. of it? What bay and sound? Does it touch on Narragansett Bay?

III. 841. In *manufactures* and *commerce*, Massachusetts is among the first states in the Union. *Its fisheries* are more extensive than those of any other state, and *its ships* are found in every quarter of the globe.

842. *The schools and literary institutions of Massachusetts* are celebrated, and *its citizens* are distinguished for their enterprise and public spirit. *Harvard University*, at Cambridge, is the oldest, and one of the most celebrated colleges in the United States.

III. How is Boston, the capital, situated? (*See plan of Boston on the Physical Map of the United States.*) What town is N. of it? What S.? What place East, on an island? What railways run from it? What seaports N. of Boston? Which is the largest of these towns? What seaports on Cape Cod Bay and the peninsula? What seaport on Buzzard's Bay? What on the Island of Nantucket? (*It is celebrated for the number of its whaling ships.*)

Where is Cambridge? Where is Worcester? What towns on Connecticut River? What among the mountains in the W.? What places are connected by the railway which passes through Massachusetts from the E. to the W.? To what places on the South do railways run from Boston, Worcester, Springfield and Pittsfield?

RHODE ISLAND.

I. 843. *Rhode Island* is the smallest state in the Union. It consists chiefly of the shores and islands of Narragansett Bay, represented on the following map.

I. *Map E. S.* — How is Rhode Island bounded on the N. and E.? On the S.? On the W.? What bay does it contain? Where are the two chief towns, Providence and Newport? (*Providence is on Pawtucket River, at the head of Narragansett Bay.*) What can you say of Rhode Island? (¶ 843.) Of what does it consist?

(91) *Map of Narragansett Bay.*

II. 844. *The surface* in the southern part is level and sandy, and in the northern hilly. *The soil* of the islands, and some portions of the coast, is remarkably fertile, and the scenery beautiful.

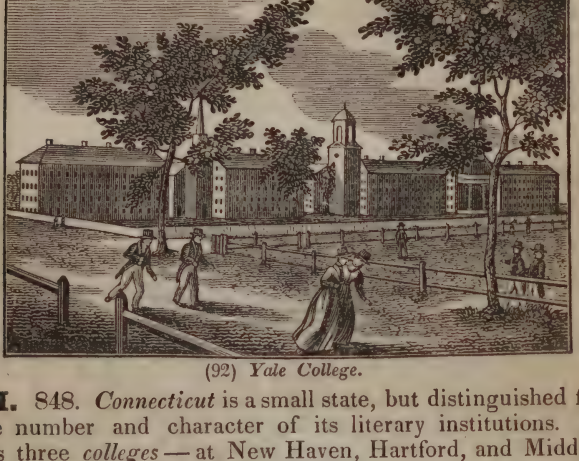
845. *The climate* is maritime (¶ 480) and mild; and on this account it is the resort of many strangers for health, in the summer season.

II. What islands do you find in Narragansett Bay? What river empties into it? What towns on that river? What other towns on Narragansett Bay? What island lies S. of Rhode Island? (*See Map of the Eastern States.*)

III. 846. Rhode Island surpasses every other state in *manufactures*, in proportion to its population; and its *commerce* is valuable. *Agriculture* is not in a very flourishing state, except in the islands, which have been called the garden of New England.

847. This state is traversed by the great *railway*, extending, in a south-western direction, from Maine, through Providence, to Stonington in Connecticut, and continued through Long Island to New York. The Blackstone *Canal* connects Worcester with Providence.

CONNECTICUT.



(92) *Yale College.*

I. 848. *Connecticut* is a small state, but distinguished for the number and character of its literary institutions. It has three *colleges* — at New Haven, Hartford, and Middletown. Yale College, at New Haven, is one of the oldest and most distinguished in the United States.

This state is traversed by the Connecticut River, whose banks abound with beautiful scenery.

I. *Map of E. States.* — How is Connecticut bounded? Which of its two capitals is on the Connecticut R.? Which on Long Island Sound? What can you say of Connecticut? (¶ 848.) What colleges has it?

II. 849. *The surface of Connecticut* is generally uneven or hilly. *The soil* is not generally rich, but *the valleys of the rivers* are fertile. *Pasturage* is good, and *agriculture* productive.

II. What large river passes through Connecticut? What rivers in the eastern part of the state? What are in the western part? In what mountains does the Housatonic River rise? What large island is opposite the southern coast of Connecticut? What point do you pass in coming from the Atlantic Ocean into the East end of Long Island Sound? What island?

III. 850. This state has a great variety of *manufactures*, which are carried to other states and countries in considerable quantities.

851. It has good *harbors*, and a considerable number of vessels engaged in the *fisheries*, and in *commerce* on the coast and the ocean.

III. What towns do you find on the sea-coast of Connecticut? What on the Connecticut River? What on the Housatonic River? What West of the Housatonic? What on the River Thames? How far N. does the canal extend from New Haven? Where do the railways of Connecticut begin and end? With what railway in Massachusetts are they connected?

MIDDLE GRAIN STATES.

I. *Polit. Map of U. States, and Map* 57, p. 79. — Where do the Grain States lie? (¶ 220, p. 77.) Which of these states lie between the Eastern States on the E., and the states on the Ohio (Ohio and Kentucky) on the W.? How are the Middle or Central Grain States bounded? (*See also* ¶ 223 *and* 224, p. 78.)

NEW YORK.

(93) *City of New York.*

I. 852. *New York* is one of the largest and most populous states in the Union; and the city of New York excels every other American city in population and commerce.

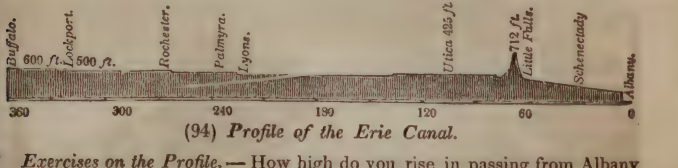
I. *Map of the Northern Division of U. S.* — How is New York bounded on the N-W. and N.? What lake and states bound it on the E.? How is it bounded on the S.? On the W.? What river runs through the eastern part? What is the capital, lying on the Hudson River? On what part of this river is the city of New York? What can you say of the state of New York? (¶ 852.) What of the city of New York?

II. 853. *The northern and eastern parts of New York* resemble New England in the ruggedness of the surface and the unproductiveness of *the soil.*

854. *The central and western parts* lie on the Apalachian table land, which spreads here into a broad surface, abounding in lakes, and is very fertile.

855. This portion of the state is traversed by *the Erie Canal,*

which is one of the longest in the world. The following profile of this canal shows the elevation of the surface.



(94) *Profile of the Erie Canal.*

Exercises on the Profile. — How high do you rise in passing from Albany to the table land, by the Erie Canal? How do you rise and descend, and what places do you pass, on the way to Buffalo?

856. New York contains valuable salt *springs and mines* of iron; and some of the most celebrated *mineral springs* in the world, at Ballston and Saratoga.

II. What considerable branch has the Hudson River? What small lakes in the state of New York S. of Lake Ontario? Into what river of L. Ontario do their waters flow? Where does the Oswego River empty? What river N. of this empties into Lake Ontario? What river W. of the Oswego? What river connects Lake Ontario with Lake Erie? Where is Chatauque Lake, in the western part of New York? What rivers flow S. from the southern part of New York? What lake in the eastern part of New York empties its waters into Lake Champlain? What river at Plattsburg? What mountains are there in the south-eastern part of the state?

III. 857. *Agriculture* is well conducted in New York, and it may be called one of the granaries of the Union. *Manufactures* are extensive and valuable. Its *commerce*, both with the interior and foreign countries, exceeds that of any other state in the Union.

III. Mention some of the principal towns on the Hudson River below Albany. Where is West Point? (*The Military School of the United States is at West Point.*) What towns above Albany on the Hudson River? What on Lake Champlain? Where are the forts of Ticonderoga and Crown Point? What towns do you find on the St. Lawrence River? What on the eastern shore of Lake Ontario? On the southern shore?

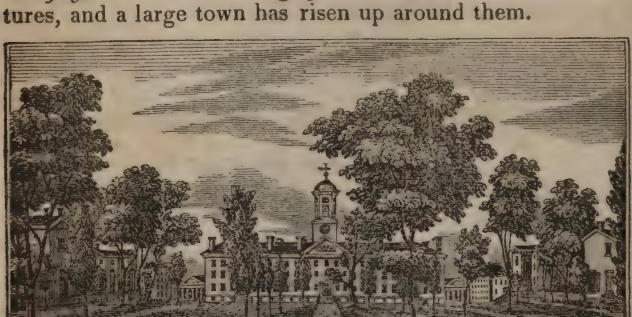
What canal connects the Hudson River with the small lakes in the interior of New York, and with Lake Erie? Mention the towns on this canal, beginning at Albany, and going W. What towns do you find on each of the small lakes? What towns on the Genesee River? What on the branches of the Susquehannah River? What places are connected by canals and railways in this part of the state? What city on the western part of Long Island? What towns in other parts? (*See Map of E. States.*)

NEW JERSEY.

I. 858. *New Jersey* has a number of valuable *literary institutions;* and Nassau Hall, at Princeton, which is represented in the engraving (95), was one of the first colleges founded in the United States.

859. *The falls of the Passaic River* at Paterson, in New Jersey, are among the most beautiful in the United States.

They furnish the moving power for extensive manufactures, and a large town has risen up around them.

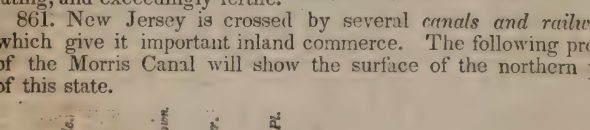


(95) *Nassau Hall.*

I. *Map of N. Division.* — How is New Jersey bounded? What river forms its western border? What is its capital, lying on the Delaware? What is remarkable in New Jersey? (¶ 858, 859.)

II. 860. *The southern part of New Jersey* is level, sandy, and barren, and thinly inhabited. *The northern parts* are rugged and mountainous, but productive. *The middle region* is level or undulating, and exceedingly fertile.

861. New Jersey is crossed by several *canals and railways*, which give it important inland commerce. The following profile of the Morris Canal will show the surface of the northern part of this state.



(96) *Profile of the Morris Canal, from New York to Easton.*

Exercise. — Describe the surface of New Jersey, on the line of the Morris Canal, as shown on the profile.

862. *The climate* of New Jersey varies, being cold in the northern highlands, mild in the middle region, and warm in the sandy plains of the southern part. *All parts produce* the grains and fruits

MICHIGAN.

(107) *Progress of Improvement.*

I. 897. *Michigan consists of* two peninsulas, separated by the Straits of Michilimackinac. It is thus almost surrounded by the lakes, which give it great *advantages for trade*, and is rapidly improving in regard to settlements, and the means of communication by roads, railways, and steamers.

I. How is Michigan bounded? (*A part of Michigan lies between L. Michigan and Lake Superior.*) What is its capital, and where? Of what does Michigan consist? (¶ 897.) What advantages does this give it, and why?

II. 898. *The southern peninsula*, between Lake Huron and Lake Michigan, contains the chief settlements. *The interior* is a table land, about 900 feet above the level of the sea, or 300 above the lakes.

On the borders of Lake Michigan, there are many tracts of sand, which is raised into hills, and changes its surface with the wind.

899. *The soil* is generally fertile. *The climate* is temperate and healthy, and this state produces the grains and fruits of the temperate Regions in abundance.

900. *The northern peninsula*, between Lake Michigan and Lake Superior, is a rugged, cold region, scarcely settled, and little known.

901. Most parts of this state are covered with *forests;* but it also contains *prairies.*

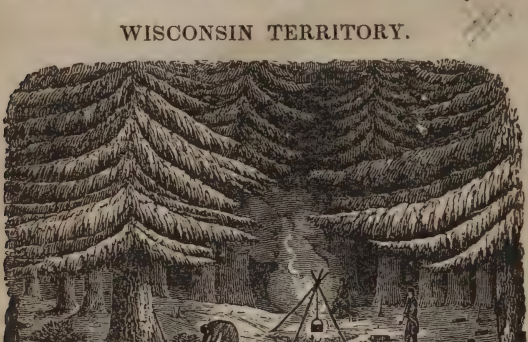
II. Are there any mountains in Michigan? What lakes does it touch upon?

III. 902. Michigan is rapidly increasing in *population* and *trade.*

important *canals and railways* have been commenced, and several *colleges* founded.

III. Where is Detroit? What towns on and near Lake Michigan? What railway in Michigan? What towns on it? Are there any towns in the North? (*Mackinaw is on the straits leading into L. Superior.*)

WISCONSIN TERRITORY.



(108) *Travelling in the Forests at Night.*

I. 903. *Wisconsin* is a large territory, lying between Lake Michigan and the Mississippi River. Its settlements are chiefly in the southern parts; and, in many districts, travellers are still compelled to lodge in the woods at night.

I. *Map of N. Division.*—Where is Wisconsin Territory? (¶ 903.) How is this territory bounded? (*See Political Map of the U. S.*) What is the capital, midway between Lake Michigan and the Mississippi? How are travellers obliged to lodge in some parts, and why? (¶ 903.)

II. 904. *The surface* of Wisconsin is very various. *The soil of the southern part* is fertile, and it is rapidly filling up with *settlements.*

905. *The northern part* is uneven and rugged, and contains *a table land*, abounding with shallow lakes and swamps. *These produce* a kind of grain called wild rice, or wild oats, which is an important article of food among the Indians, and is gathered from the stalks into their canoes.

906. Wisconsin contains valuable *mines* in the South-West, especially those of lead, which have long been wrought.

II. What rivers are there in Wisconsin? What hills? What bay in

the North? What river, emptying into it, rises near Wisconsin R.? What lakes and rivers are there on the N-E.?

III. What towns on Lake Michigan? What on the Mississippi River? What in the interior? In what two ways can exports be sent from Wisconsin to seaports?

IOWA.

(109) *Emigrants in a newly-settled State.*

I. 907. *Iowa* lies between the Mississippi and Missouri Rivers. Herds of *buffaloes* still feed on its western prairies; but in consequence of the rich products of its soil and climate, and mines, *settlers* are going into it more rapidly than into any new state hitherto formed.

I. *Political Map of U. States.* — By what river is Iowa bounded on the E.? By what on the W.? By what territory on the N.? What state lies S. of it? Repeat all the boundaries, and bordering states, in order. What is the capital?

II. 908. *The surface* of Iowa is uneven. *The valleys* of the streams are covered with forests; but *the greater part* of the territory consists of prairies.

909. *The soil* is very rich. *The climate* is favorable; and *the productions* of Temperate Regions are easily raised.

II. What rivers are there in Iowa, emptying into the Mississippi? What into the Missouri? What river runs towards the North? What lakes empty into it and form a part of its sources? Where does the Red River empty? (*See Map of N. America.*) What lakes give rise to the Mississippi? What *coteau*, or ridge of land, in the western part of the state?

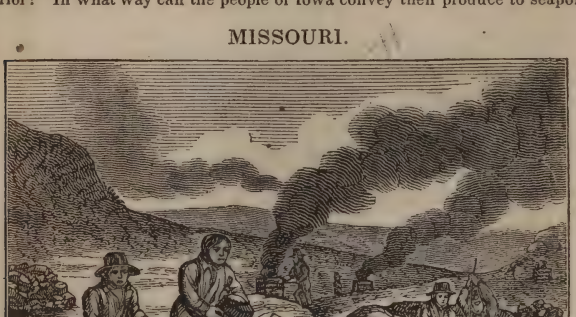
III. 910. The south-eastern part contains valuable *minerals*, especially lead ore. *Dubuque* is an old settlement formed by the French, for the purpose of working the lead mines.

911. *A large part of Iowa is still occupied* by Indian tribes; but

the south-eastern part contains many flourishing towns, and the white population is increasing with extraordinary rapidity.

III. What towns has Iowa on the Mississippi R.? What fort on the Mississippi? What fort W. of Iowa on the Missouri? What towns are there in the interior? In what way can the people of Iowa convey their produce to seaports?

MISSOURI.



(110) *Lead Mines in Missouri.*

I. 912. *The lead mines of Missouri* were among the first which were wrought in the United States, and large quantities of this metal are exported.

I. *Map of N. Division.*— How is Missouri bounded? What great river passes through it? What is the capital city, on the R. Missouri?

II. 913. *Missouri is generally* a region of prairies and table lands, crossed by a part of the Ozark Mountains.

914. A considerable portion of *the soil* is unproductive, but the valleys of the streams are very fertile. *The pastures* feed great numbers of cattle and swine.

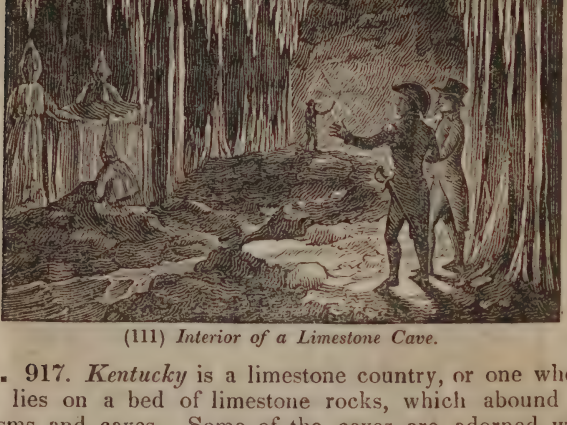
915. *The climate*, like that of other inland countries, has hot summers and severe winters. (*See* ¶ 480.) *It produces* the grains and fruits of the Temperate Regions; and *in the South*, cotton may be cultivated.

II. What mountains in the southern part of this state? What branches of the Missouri in this state, on the S.? What on the N.? What rivers empty into the Mississippi? What rivers flow out of this state on the S. E.?

III. 916. *Missouri* is one of the largest states in the Union, *lying nearly* in the centre of its territory, and rapidly increasing in *population, commerce, and wealth.*

III. What towns are there on the Mississippi River? Which of these is the largest in the state? What towns on the Missouri River? On the Osage?

KENTUCKY.



(111) *Interior of a Limestone Cave.*

I. 917. *Kentucky* is a limestone country, or one whose soil lies on a bed of limestone rocks, which abound in chasms and caves. Some of the caves are adorned with columns of crystalline limestone, like those in the engraving. (*See* ¶ 347—9.) *The Mammoth Cave* is one of the largest in the world, and contains a hotel in one of its great chambers.

I. *Map of N. Division.* — How is Kentucky bounded? What river bounds it on the N.? What on the W.? What is its capital?

II. 918. *The surface of Kentucky* is generally uneven. It rises into mountains *on the East*, and spreads into plains *on the West*. *The soil* is generally rich; but *the water* sometimes sinks away into the chasms and caves, and leaves the streams and the soil dry.

919. *The climate* is mild and healthy; and *the productions* of temperate countries are abundant, especially wheat, hemp, and tobacco.

920. It contains *mines* of iron and coal, and *quarries* of limestone in abundance. It has also salt springs and nitre caves, from which *salt and nitre* are made in considerable quantities.

II. What mountains are there in Kentucky, and where? What rivers empty into the Ohio in this state? What rivers flow out of the state, and return?

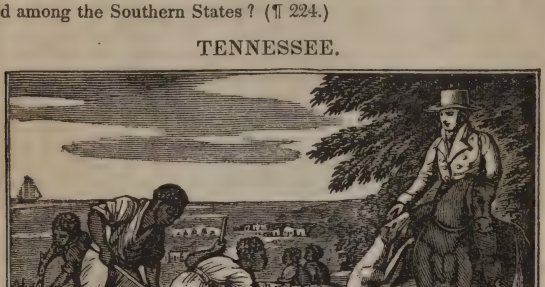
III. 921. *Agriculture* is the chief occupation of the people. *Manufactures* are beginning to flourish. The great rivers on its borders furnish peculiar advantages *for commerce*; and this state *exports* cattle, and the products of the field, in large quantities, chiefly through New Orleans.

III. What are some of the towns on the Ohio River? Which is the largest? What on the Licking R.? What on the Kentucky R.? On Salt R.? On Tennessee R.?

SOUTHERN AND SOUTH-WESTERN, OR COTTON STATES.

I. *Map of S. Division.* — Where do the Cotton States lie? (¶ 226, p. 80.) How may they be divided? (¶ 227.) Which are the Southern States? Which are the South-Western? Why are not Maryland and Virginia classed among the Southern States? (¶ 224.)

TENNESSEE.



(112) *Tobacco Plantation.*

I. 922. *Tennessee* produces cotton and tobacco abundantly. They are cultivated by slaves.

I. *Map of S. Division.* — How is Tennessee bounded? Where is Nashville, the capital?

II. 923. *Tennessee is divided,* by the Cumberland Mountains, into East and West Tennessee, which differ in their surface and character.

924. *East Tennessee* is an elevated, mountainous region, lying among the branches and outer ranges of the Apalachian Mountains. It abounds in fine *scenery, and has been called* the Switzerland of the United States.

925. *The surface* is, of course, rugged, and *the soil* is fertile only in the valleys. *The climate* is temperate; and *the productions* resemble those of the Northern States.

926. *West Tennessee* has a level or waving *surface.* *The soil* is fertile, and *the climate* so warm as to produce cotton.

II. Which part of Tennessee appears to be mountainous? What river passes between the Cumberland and the Apalachian Mts.? What course

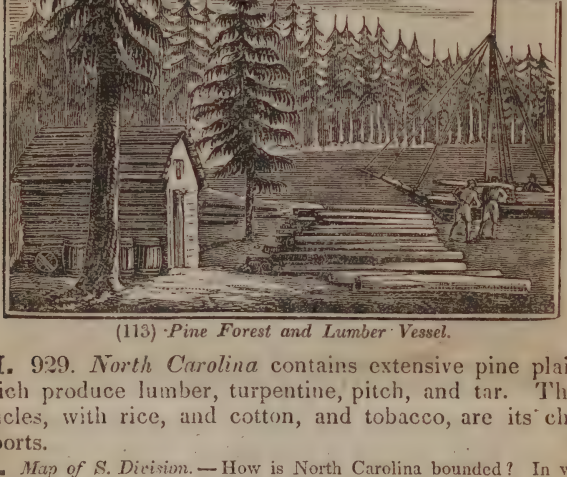
does the Tennessee River take after passing out of this state? Does it return into the state? What river in the northern part of Tennessee? Which part of the state appears to be level? (¶ 926.) What river do you find there, emptying into the Mississippi?

III. 927. This state rests on limestone rocks, *like Kentucky;* and contains salt springs, nitre caves, and many valuable *minerals.*

928. *Agriculture* is the chief employment of the people; and cattle and the products of the field are *exported*, to a large amount, chiefly through New Orleans. The *manufactures* of iron, hemp, and cotton, are considerable.

III. What towns do you find in East Tennessee, on the Holston River? What on the Tennessee River? What on the Cumberland River? On the Tennessee River after it returns into this state at the W.? Near the Mississippi River?

NORTH CAROLINA.



(113) *Pine Forest and Lumber Vessel.*

I. 929. *North Carolina* contains extensive pine plains, which produce lumber, turpentine, pitch, and tar. These articles, with rice, and cotton, and tobacco, are its chief exports.

I. *Map of S. Division.* — How is North Carolina bounded? In what part of the state is Raleigh, its capital?

II. 930. *North Carolina embraces* a part of the lowland terrace and highland of the Apalachian Mountains. (pp. 173, 174.) It has thus every variety of *surface and soil*, from the grain fields and rocks of the highlands, to the rice swamps and barrens of the lowlands.

931. *Its climate* is generally warm, and the lowlands would yield

most of *the productions* of the Warm Regions; but their cultivation is neglected.

932. North Carolina has *mines* of iron; and others which have furnished large quantities of gold.

II. What sounds on the coast of North Carolina? What capes? Mention the chief rivers, beginning at the North? What rivers pass out of this state into South Carolina? What into Tennessee?

III. 933. *The coast* is flat and sandy, with many shallow inlets; but *the commerce* of the state is very much limited by the want of good harbors. *Manufactures* have been recently established, and are said to be increasing.

934. *The mountains* in the western part of this state contain the highest peaks of the Apalachian chain.

III. What seaports has North Carolina? What towns on the Chowan River? On the Roanoke? On the Tar River? On the Neuse? On Cape Fear River? What towns on the table land W. of the Blue Ridge? What places are connected by railways with Petersburg and the northern line of railways?

SOUTH CAROLINA.

(114) *Rice Swamps.*

I. 935. *South Carolina is remarkable for* its immense swamps, which produce rice of the best quality. This plant requires to be covered with water during one period of its growth.

I. *Map of S. Division.*—How is South Carolina bounded on the N. and N-E.? On the S-E.? On the S-W.? Where is Columbia, its capital?

II. 936. *South Carolina is divided*, like the other Southern States, into the lower, middle, and upper country; with a corresponding variety of surface and soil.

937. *The climate* is hot, and *the chief productions* are cotton and rice; these are *exported* in large quantities, and give this state a large share of commerce and wealth.

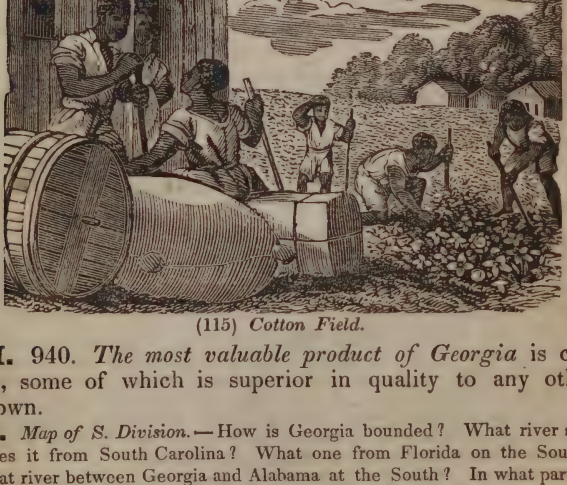
II. What river separates S. Carolina from Georgia? Mention the rivers, beginning at the E. Which appears to be the largest?

III. 938. *Manufactures* are chiefly in families. The harbor of Charleston gives it an opening for extensive foreign *commerce*, both in its own products, and those of neighboring states; but it has few ships of its own.

939. One of the longest *railways* in the United States connects Charleston with the Savannah River, and another connects it with the interior of North Carolina.

III. What seaports on the coast of South Carolina? Which of these is the largest city in the state? To what places do the railways pass from Charleston? What water communication is there from the Santee River to Charleston harbor? What towns on the Great Pedee River and its branches? What on the Savannah?

GEORGIA.



(115) *Cotton Field.*

I. 940. *The most valuable product of Georgia* is cotton, some of which is superior in quality to any other known.

I. *Map of S. Division.*—How is Georgia bounded? What river separates it from South Carolina? What one from Florida on the South? What river between Georgia and Alabama at the South? In what part of the state, and on what stream, is Milledgeville, the capital?

II. 941. Georgia has the same variety of *surface, soil, and climate*, as the other Southern States. (*See* p. 173, 174.) *The high country* is not extensive, but is very productive in northern grains.

942. *The low country* is sufficiently warm in the South to produce the sugar-cane.

943. The high country contains gold *mines;* but they are of far less value to the people than their cotton-fields.

II. What rivers pass through Georgia? In what part of it do most of them rise? Which part of the state appears to be mountainous? What swamp do you find in the southern part? Has Georgia much sea-coast?

III. 944. Cotton is *the chief article of cultivation* in this state. *Manufactures* are few; and *commerce* is carried on chiefly in northern ships.

945. Several important *railways* have been constructed across this state; and its *resources and wealth* appear to be increasing.

III. What towns has Georgia on or near the sea? What on the Savannah River? What on the Altamaha and its branches? What on the Chatahoochee? To what place does the railway extend from Augusta? The railway from Savannah? What towns in this state have colleges?

ALABAMA.

I. 946. *Alabama has its seaports and commerce* on the Gulf of Mexico. It produces large quantities of cotton, and the rivers are navigated by numerous steamers, employed in conveying it to seaports.

I. *Map of S. Division.* — How is Alabama bounded? Does any part of it extend to the Gulf of Mexico? Where is Tuscaloosa, the capital?

II. 947. *Alabama is divided* into the lower, middle, and upper country; but its soil is more generally fertile than in the Southern Atlantic States; and it has fewer swamps and barrens. *The river valleys* are very fertile.

948. *The climate* varies, from the hot and unhealthy lowlands, to the pleasant middle country, and the temperate highlands. *Its productions* embrace those of the Warm and Temperate Regions, but cotton is the most important.

II. Does any part of Alabama appear to be mountainous? What stream runs through this part of the state? What rivers rise here? What river empties into the Gulf of Mexico at Mobile? What branches form the Mobile R.? What river separates Alabama from Western Florida?

III. 949. Alabama has a narrow *sea-coast;* but contains one of the best *harbors* of this region, at Mobile. A sound, shut in by low islands, furnishes *an inland passage* for small vessels to New Orleans.

950. *The northern part of this state* embraces the high country which forms the southern extremity of the Apalachian Mountains, and the valley of the Tennessee River; and by this stream, it has a channel of trade to the Ohio and Mississippi Rivers.

951. *Several canals and railways* of importance have been made in Alabama, and others begun; and this state is scarcely surpassed by any in the Union, in its *advantages for agriculture and commerce.*

III. What seaports has Alabama? What towns on and near the Alabama River? The Tombigbee? The Tennessee? Where do you find a canal and railway in the northern part of the state?

FLORIDA.

I. 952. *The greater part of Florida consists* of a peninsula, extending to the borders of the Torrid Zone, with a narrow belt of land North of the Gulf of Mexico.

I. *Map S. Div.* — How is Florida bounded? What is the capital? Of what does it consist? (¶ 952.) Which part of it is a peninsula?

II. 953. *Florida* is extremely level and low; and a large part of it consists of the immense marshes called "*everglades*," or of sand and pine plains.

954. Among these are some higher tracts, called "*hummocks*," which are covered with fine timber, and are capable of cultivation.

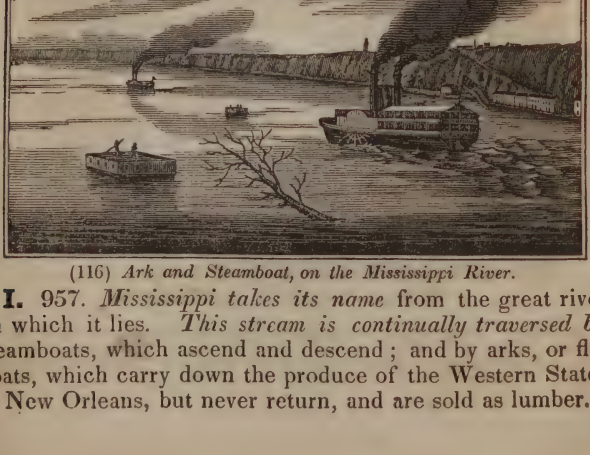
955. *The climate* is hot; and *the productions* of the Hot Regions flourish here; but the crops are sometimes cut off by *the cold winds* from the North. *The live oak timber* is a valuable export.

II. What rivers do you find in Florida? What lake?

III. 956. Florida has *seaports* both on the Atlantic and the Gulf of Mexico; and *its rivers* are numerous and navigable. It has thus great *advantages for commerce;* but only a very small portion of the territory is *settled.*

III. What seaports, in Florida, on and near the Atlantic? What on the Gulf of Mexico?

MISSISSIPPI.



(116) *Ark and Steamboat, on the Mississippi River.*

I. 957. *Mississippi takes its name* from the great river on which it lies. *This stream is continually traversed by* steamboats, which ascend and descend; and by arks, or flat boats, which carry down the produce of the Western States to New Orleans, but never return, and are sold as lumber.

I. *Map S. Div.*—How is Mississippi bounded? What is its capital? What river runs along its western border? What navigation on it? (¶ 957.)

II. 958. *The northern part of Mississippi* belongs to the middle country of the Southern States, and is uneven or hilly. *The banks of the river* here rise into high bluffs, as represented in the preceding engraving.

959. *The southern part* belongs to the lowlands, (p. 173,) and *abounds in* pine plains and prairies, and in swamps which border the streams and the sea-coast.

960. *The soil* of a large part of this state is fertile, *the climate* is warm, and the crops of cotton are abundant. But the people obtain their *provisions* chiefly from the North-Western States.

II. Does any part of Mississippi appear to be mountainous? To what lowland does its southern part belong? (*See Physical Map of U. S.*) What rivers empty into the Gulf of Mexico? What into the Mississippi?

III. 961. *Mississippi is watered* by numerous streams, which are *navigable* for a considerable part of their course.

962. *The coast* is lined with low islands, and is destitute of good harbors. *Its commerce* is carried on by the ports on the Mississippi River, which is so deep that large ships ascend as far as Natchez. *Manufactured articles* are chiefly imported.

III. What towns are there on the Gulf of Mexico? On the Mississippi R.? On the Yazoo River? On Pearl R.? What towns are connected by railway? Where is Port Gibson? What towns on the South-West?

LOUISIANA.

(117) *Sugar-Cane Field, and Cane Mill.*

I. 963. *Louisiana produces* the sugar-cane, which is ground in mills. The juice is pressed out, and boiled into sugar.

I. *Map S. Div.*—How is Louisiana bounded? What is its capital? What is one of its productions? (¶ 963.)

II. 964. *Louisiana lies* on the lower course, and the delta, of the Mississippi. *A large part of it has been formed* by the mud deposited from the water of the river; and the land is thus extending every year.

965. *It is crossed*, in every direction, by the branches and outlets of the river; and a large portion of it consists of *swamps*.

966. *The soil* is very fertile, where it can be cultivated; and the prairies furnish rich *pastures*. *The climate and productions* are those of the Hot Regions; and *plants are green* the whole year.

II. What part of Louisiana lies on the delta of the Mississippi? What is a delta? (*See* ¶ 410.) What lakes are there N. and E. of New Orleans? What streams in the western part of the state? What bays on the coast?

III. 967. Sugar and cotton are *the chief crops* cultivated. *Provisions*, as well as *manufactures*, are chiefly obtained from abroad.

968. This state, and especially the capital, is the centre of *trade* for the basin of the Mississippi River; and *New Orleans* is one of the first commercial places of America.

969. A large part of *the inhabitants* of Louisiana are French; and this *language* is chiefly spoken.

III. Are there any towns between New Orleans and the sea? What towns on the Mississippi R. above New Orleans? What towns are the principal E. of the Mississippi? What W. of this river? What places have colleges?

ARKANSAS.

I. 970. *Arkansas* is one of the largest of the United States, but one of the most thinly settled.

I. *Map S. Div.*—How is Arkansas bounded? What is its capital? What can you say of it? (¶ 970.)

II. 971. It is level and marshy *on the Mississippi*. *The western part* is crossed by the Ozark Mountains, which give it an elevated and irregular *surface*, and a barren *soil*.

II. What river borders Arkansas on the E.? What great river passes through its south-western corner? What one through the middle of the state? What streams North of the Arkansas? What South of it? What springs on the Wachita River?

III. 972. *The streams* are frequently dry in summer; and salt plains occur, which render *the waters* of many rivers brackish.

973. Arkansas contains extensive *prairies*, with rich *pasturage*, and a great deal of *land* which is fertile and *fit for tillage*.

974. *The climate* is hot, and cotton is its *chief product*. *Its forests* contain valuable timber.

975. Arkansas also possesses *mines* of iron, lead, coal, and salt, and valuable *mineral springs*.

III. On what river is Little Rock? What other towns on the Arkansas River? What on the Mississippi? On Red River?

INDIAN TERRITORY.

I. 976. *The Indian Territory* extends from Texas to the Platte River, West of Missouri and Arkansas. It is now inhabited by Indians who formerly occupied the states East of the Mississippi.

I. *Polit. Map U. States.* — How is the Indian Territory bounded? What ports and towns do you find? Who occupy this territory? (¶ 976.)

II. 977. *The surface of this territory* is very level, or gently waving, except on the South-East near *the Ozark Mountains.*

978. *The eastern portion*, and many of *the valleys* of the streams, are productive either for pasturage or tillage.

979. *The western portion* contains a part of the Great American Desert, and the barren regions bordering upon it.

II. *Phys. and Polit. Map of U. S.* — What desert in the western part of the Indian Territory? What peaks of the Chippewan Mts.? What are the principal branches of the Missouri and the Mississippi in this territory?

III. 980. The Cherokee, Creek, Choctaw, Chickasaw, and Seminole Indians, and several smaller tribes, are *now settled in this territory. They are governed* by their own laws and chiefs; and the United States government assures them of a permanent residence here.

981. The Cherokees, and several other tribes, have acquired a *knowledge* of books and of Christianity, and the *arts* of civilization.

982. Several *missionary stations* are maintained among them, by societies in the United States.

MISSOURI TERRITORY.

(118) *Sioux hunting Buffaloes.*

I. 983. *Missouri Territory* is enclosed between the Mis-

souri and the Chippewan Mountains, North of the Platte River.

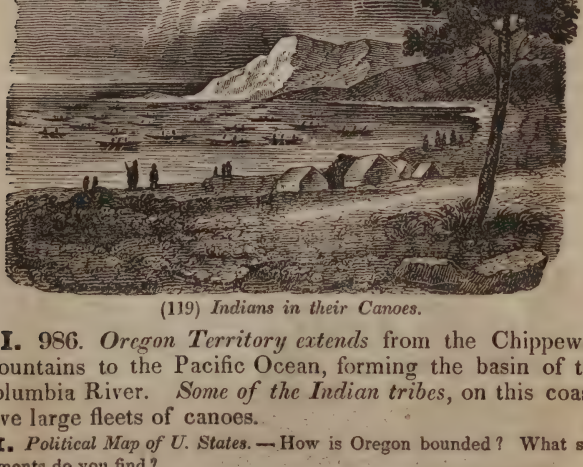
984. It is little known, but *it is generally* a region of prairies, abounding in game, over which the Indians wander. They *subsist* chiefly by hunting buffaloes.

I. *Polit. Map of U. States.* — How is Missouri Territory bounded? What fort on the Missouri? How do the Indians subsist? (¶ 984.)

II. 985. *Forests* are found only on the borders of the mountains, or in the valleys of the streams which intersect the country in every direction.

II. *Phys. and Polit. Map of the U. S.* — What streams do you find in Missouri Territory? What part of it is occupied by the American Desert? What hills separate the Yellow Stone River from the branches of the Missouri, south-east of it?

OREGON TERRITORY.



(119) *Indians in their Canoes.*

I. 986. *Oregon Territory extends* from the Chippewan Mountains to the Pacific Ocean, forming the basin of the Columbia River. *Some of the Indian tribes*, on this coast, have large fleets of canoes.

I. *Political Map of U. States.* — How is Oregon bounded? What settlements do you find?

II. 987. As already stated, (¶ 680,) *Oregon is naturally divided* into three portions, which differ materially in surface, soil, and climate — the lower country, or lowland, on the coast, and two terraces rising above it.

988. *The lower country* is very fertile, producing timber-trees of enormous size, and containing fine meadows and prairies for cultivation. Its climate is also mild, and the ground is rarely frozen; but the summers are dry, and the crops liable to fail.

The first terrace, or *middle country*, has also a mild but cool climate, and produces good pasturage through the year; but is unfit for cultivation. The second terrace, or *high country*, is rocky and barren, and in many parts desert; and is unfit either for cultivation or pasturage.

II. *Phys. Map of U. States.* — What mountains are there near the coast in Oregon? (¶ 677.) What in the interior? (¶ 680.) What is its chief river? What are the sources and branches of the Columbia R. on the N.? What is its principal branch on the S.? What branch near the coast? What capes at the mouth of the Columbia?

III. 989. *This territory is now chiefly occupied* by the Indian tribes, the forts and hunters of the British Hudson's Bay Fur Company, and American trading and missionary settlements, which are constantly increasing.

III. *Political Map of U. States.* — What settlements and forts are there on the Columbia R.? What in other parts of Oregon?

TEXAS.

(120) *Wild Horses in Texas.*

I. 990. *In the northern parts of Texas*, wild horses are numerous, which graze together in large herds, and seem

to have leaders and sentinels, like an army, to guard against danger.

I. *Polit. Map of U. States.* — How is Texas bounded? What is its capital? For what is it remarkable? (¶ 990.)

II. 991. *Texas consists* of a lowland, terrace, and highlands, like those of the other Southern United States, rising gradually from the Gulf of Mexico.

992. *The coast* is low and sandy; and *the harbors* and mouths of the rivers are generally obstructed by bars and shoals.

993. *The surface of the lowlands* is perfectly flat, and little elevated above the sea; and *the terrace* above it is level.

994. *Both lowlands and terrace are traversed* by numerous *streams*, navigable for a considerable distance.

995. *The streams flow* in deep ravines, and are bordered by *forests*; but the greater part of the country is covered with prairies, which yield fine pasturage. Those of the middle country, or terrace, have a deep, fertile soil.

996. *The climate* is hot, and produces fevers in the lowlands; but *on the terrace*, it is healthy. *Snow and ice* are rare; and *the winters* are mild, but are subject to great *changes*, from the alternate northerly and southerly winds.

997. *The lowlands produce* sugar, and cotton, and the fruits of warm countries. *The terrace and highlands yield* wheat, tobacco, and the grains and fruits of the Temperate Regions, in abundance.

998. *Mines* of lead, copper, coal, salt, and also of silver, are said to exist, but have not been explored by the present inhabitants.

II. What mountains pass through Texas? What are on its western borders? What river bounds it on the E.? On the N.? What are the principal rivers between the Sabine and the Rio del Norte? What bays are there on the coast?

III. 999. *Texas was formerly* a province of Mexico; but was settled by emigrants from the United States, and became independent in 1836. In 1846 it was admitted as a State in the American Union.

1000. *The population of Texas* is still small, and its settlements are scattered; but it is rapidly increasing, by emigrants from the other states.

III. What seaports do you find in Texas? What are the rivers, beginning at the East? What places in Texas lie between the river Trinity and the Sabine river? Mention the towns on each of the rivers in order

SOUTHERN COUNTRIES OF NORTH AMERICA.

MEXICO.

(121) *Volcano of Jorullo.*

I. 1001. *Mexico lies* chiefly on a table land, which is crossed by a range of volcanoes. In one part of it, in 1759, *a new volcano*, called Jorullo, which is 1600 feet high, was thrown up in a few days, besides many smaller ones around it.

I. *Political Map of U. States.* — How is Mexico bounded? What is the capital? What remarkable volcano in it? (¶ 1001.)

II. 1002. *The table land of Mexico* is one of the most fertile and populous in the world. It is about 8000 feet *above the level of the sea;* and the land ascends and descends as in the profile 122.

(122) *Profile of Mexico, from Vera Cruz to the Pacific Ocean.*

Exercises on the Profile. — Is the city of Mexico on high or low ground? Describe the ascents and descents in going from Vera Cruz to the Pacific Ocean. Is any part of the course nearly level? What cities do you pass? What volcanoes will you see on the way?

1003. *The table land of Mexico* is so level, that carriages may be driven upon it from the capital to Santa Fe, a distance of 1200 miles; but North of this, the country is rugged.

1004. *The soil* is fertile, but not well watered. *Its climate* is temperate, and *produces* the grains and fruits of the Temperate Regions in abundance.

1005. *The declivities and lowlands* of this table land have a fertile *soil*, and every variety of *climate and productions*, from those of the Torrid Zone to those of the Temperate Regions.

1006. Mexico is also rich in *mines* of gold and silver, and furnishes a large part of the silver which is used by other nations.

II. What mountains pass through Mexico? What peaks at the North? What volcanoes in the middle regions? What rivers has Mexico? What gulf and peninsula on the Pacific Ocean?

III. 1007. *Mexico is inhabited* by Indians, Mestizoes, and a small proportion of Spaniards. *The northern parts* are occupied chiefly by Indians.

1008. *The people* are generally ignorant, indolent, and unskilful in *agriculture and manufactures*. The *commerce* is carried on chiefly by foreigners.

1009. Yucatan contains the *ruins* of many fine cities, which were probably inhabited by the ancient Mexicans.

III. *Political Map of U. States.* — What seaports has Mexico on the Gulf of Mexico? What seaport on the gulf is nearest to the capital? What on the Pacific Ocean? What cities S. of the capital, in the interior? What between Mexico and the Tropic of Cancer? What are the principal cities N. of this line? Where is Santa Fe? What are the most northerly ports on the Pacific? What places on the peninsula of California? What islands S. of this peninsula?

CENTRAL AMERICA, OR GUATEMALA.

I. 1010. *The forests of Central America* abound with mahogany and logwood trees, and these valuable woods are cut and exported in large quantities at the British settlements on the Bay of Honduras.

I. *Polit. Map of N. America.* — How is Central America bounded? What is its capital? For what is it remarkable? (¶ 1010.)

II. 1011. *Central America* is a mountainous region. It contains more than twenty *volcanoes*, and is subject to frequent *earthquakes* and eruptions, which have twice destroyed the capital.

1012. *The southern part of Central America* is low, as represented in the profile 123, and it has been proposed to cut a canal from Lake Nicaragua to the Pacific Ocean, through which vessels might pass to the River St. Juan and the Atlantic Ocean.

II. — What lake in Central America? What river flows from it?

(123) *Profile of Guatemala across Lake Nicaragua.*

Exercises on the Profile. — By what river can you ascend from the Caribbean Sea to L. Nicaragua? How could a water passage be made here across the peninsula?

III. 1013. *The state of the people, agriculture, manufactures, and commerce,* is very poor. *The government* is still unsettled, and the different states are frequently at war; so that no improvement is made.

III. *Political Map of N. America.* — What seaports has Guatemala on the Caribbean Sea? What on the Pacific Ocean? What towns in the interior?

WEST INDIES.

(124) *Sugar Plantation in the West Indies.*

I. 1014. *The most valuable productions of the West Indies* are sugar and coffee, which are exported in large quantities. *They are cultivated by* Africans, who are slaves in all these islands except the British, where they have been emancipated.

I. *Physical Map of N. America.* — Where are the West India Islands? What seas do they enclose in part? Which are the four largest islands? (*They are usually called the Greater Antilles.*) What are the most valuable products of the West Indies? (¶ 1014.)

II. 1015. *The West India Islands form* an arch, extending from Mexico to the north-eastern part of South America. *They comprise* five large, and more than forty small islands. Besides these, there are many low, coral islands, called keys.

II. *Physical Map of N. America.* — Where are the Bahama Isles? What are the small islands called, which lie S. E. of Porto Rico? What large island lies on the coast of South America?

In what zone do the West India Islands lie? What effect must the sea have on their climate? (*See* ¶ 479.) What wind blows constantly in this zone? (¶ 454.)

1016. These islands have generally a fertile *soil*, and *produce* in abundance the plants and fruits of the Torrid Zone.

1017. *The heat* is moderated by the sea, the trade winds, and the land and sea breezes. *The winters* are warm and delightful; *the highlands* are always temperate; and it is only in the moist lowlands that the heat is oppressive, and *the climate unhealthy.*

1018. *In the rainy season*, the rain descends like a deluge; and from August to November, these islands are subject to *hurricanes*, which often destroy trees, crops, and even buildings. Many of them are also subject to *earthquakes.*

II. Greater Antilles,

INCLUDING CUBA, PORTO RICO, HAYTI, AND JAMAICA.

II. 1019. *The Greater Antilles are all traversed by* ranges of mountains, which give them a variety of scenery and climate. *The lowlands and valleys* are very fertile. Some of the mountains are *volcanic*, and these islands are subject to *earthquakes*, which have sometimes destroyed entire cities.

1020. They have regular land and sea *breezes.* In the intervals between these, the heat is often oppressive, especially on the lowlands, which are generally unhealthy for strangers.

1021. Cuba and Porto Rico *belong* to Spain. *Cuba* is the largest and most fertile and wealthy of these islands. It yields a great quantity of sugar and coffee, and the best tobacco known, and it also contains valuable *mines.* *Porto Rico* is very fertile, but not so well cultivated.

1022. Hayti, or St. Domingo, was taken from the French and Spaniards by their African slaves, who have established an independent republican government.

1023. They profess the Roman Catholic *religion;* and few are acquainted with the Bible. *They are* ignorant and indolent; and the island is not well *cultivated.*

1024. Jamaica is a beautiful island, rising in the centre into mountains and table lands, where the climate is very temperate.

1025. *It belongs* to the British. *The emancipated slaves* are improving in knowledge, industry, and morality.

II. *Political Map of N. America.* — What islands are called the Greater Antilles? Which is the largest? Which is the most eastern? In what direction, and how far from Florida, is Cuba? What is the chief city? What city on the South side? Which way is Hayti from Cuba? What is its chief town? What other place on the N. side? Where is Jamaica? What is the chief town?

II. Caribbee Islands.

1026. *The Caribbee Islands* are generally small, and appear like mountains rising from the sea. *Most of them* are volcanic, and are subject to earthquakes. *An earthquake in* 1843, destroyed the capital city of Guadaloupe in a few minutes.

1027. *These islands* are very fertile; and the constant trade winds give them a *climate* almost as pleasant and uniform as that of the ocean around them.

1028. *The greater number of these islands belong* to Great Britain. *The rest* are colonies of France, Holland, Denmark, and Sweden.

1029. Trinidad is a large island, at the southern extremity of this range, which belongs to Great Britain. *Its surface* is almost level, and *its soil* very fertile; but *its climate* is hot and unhealthy.

II. *Maps of N. America.* — Which are some of the northern Caribbee Islands? Which are the most southern? Where is Trinidad?

II. Bahama Islands.

1030. *The Bahama Islands* are very numerous; but the greater number are mere rocks or sand-banks, and few are inhabited.

1031. *The climate* is fine and healthy; but *the soil* is generally barren, and *produces* only cotton and tropical fruits. Salt is the only valuable *export*.

II. *Maps of N. America.* — Where are the Bahamas? What are the principal islands? Where is Guanahani?

II. Bermuda Isles.

1032. *The Bermuda Isles* are generally spoken of as a part of the West Indies, although distant from the rest. They have a temperate *climate, and produce* fine fruits, and valuable cedar timber, used in building ships.

II. *Political Map of N. America.* — Where are the Bermuda Isles? What American state lies in the same latitude?

III. cities of north america.

1033. America is much less distinguished for the number and size of its cities than Europe and Asia. There are none which are so large as the chief cities of Europe, and only five above the third rank in population.

1034. *In the cities of the* United States, the houses are generally built of brick. The streets are broader and more neat than in most European cities, and are usually paved, and furnished with sidewalks for foot passengers.

1035. *They are adorned* with churches and other public buildings, which often have considerable beauty. Perhaps no cities in the world are more

distinguished for the number of *humane and charitable* institutions, than those of the United States.

1036. *The towns of the Northern United States*, especially of New England, are seldom closely built. *The houses* are generally of wood, separated by gardens and cultivated grounds; and *the streets* are usually shaded with trees. These circumstances give them peculiar beauty.

1037. *The towns of the Western States*, and of the western parts of New York and Pennsylvania, are laid out more regularly, and the buildings are generally more elegant, than in the older towns of the Atlantic States.

1038. *In the Southern States*, the people are so much scattered, that there are few towns or villages, and only a small number of towns of considerable size.

1039. Most of the principal cities of the United States are *seaports;* and *the largest are situated* on islands or peninsulas. New York and New Orleans are *on islands;* Boston, Philadelphia, and Charleston, are *on peninsulas;* Hartford, Albany, Trenton, Richmond, and Savannah, are capitals, *at the head of sloop navigation* on their respective rivers.

1040. *The seats of government* of the states are often very small towns, chosen only on account of their central situation.

1041. WASHINGTON was laid out, on an extensive and regular plan, as the seat of government for the United States. It is not yet closely built; and the clusters of houses, with extensive vacant spots, appear like a number of villages. The Capitol, for the meetings of Congress, and the president's house, are magnificent buildings.

1042. *New York* is among the first commercial cities in the world. It is situated on a beautiful and spacious harbor, formed by the Hudson River and the passage from Long Island Sound, here called the East River. The streets rise from the water, and are laid out with considerable regularity.

1043. *Philadelphia* is the first city in the Union in manufactures. It is remarkable for the regularity and neatness of its streets, and for the beauty of its environs. Its inland trade is extensive, and its market is said to be almost unrivalled.

1044. *Baltimore* is situated on a bay running up from the Patapsco River. It is divided by a small stream into two parts — the Town, and Fell's Point. The latter is the principal seat of commercial business. This city has increased with great rapidity. It is adorned with one of the first monuments erected to the memory of Washington in our country.

1045. *Boston* is the principal city of New England, in commerce, population, and wealth. It is situated on an irregular peninsula, and the streets are narrow and crooked. The harbor is excellent, adorned with islands, and surrounded by a beautiful and highly cultivated country.

1046. *New Orleans*, from its situation at the mouth of the Mississippi, is the centre of trade for the extensive country watered by this river and its branches. The ground on which it stands is lower than the river, in many parts of the town, and extremely wet. The situation and climate render it very unhealthy in the warm season, especially to strangers.

1047. *Charleston* is regularly built, upon a low peninsula between Ashley and Cooper Rivers, which form a fine harbor at their junction. It is a place of considerable wealth and commerce, and is one of the largest cities in the states South of Maryland.

1048. *Albany* is a flourishing city, finely situated for trade at the head of sloop navigation on the Hudson River. Near this place, the canals from Lake Champlain and Lake Erie unite with the Hudson.

1049. *Salem* is a flourishing and wealthy place, the second in New England in commerce. It has been distinguished for the extent of its trade with the East Indies.

1050. *Providence* is the third commercial town in New England. It is distinguished for its college, and the numerous manufacturing establishments in its neighborhood.

1051. *Richmond* is the seat of trade for the interior of Virginia. It is situated on a beautiful declivity, on the banks of James River. *Norfolk* is the principal seaport of Virginia. *Savannah* is the principal seaport of Georgia, and has a flourishing commerce.

1052. *Cincinnati* is the most populous city, except New Orleans, in the Western States, and is increasing with great rapidity in commerce and population.

1053. *Newark* is the largest town in New Jersey, distinguished for its flourishing manufactures. *New Haven* is one of the most beautiful towns in the United States, distinguished as the seat of Yale College. *Hartford* is finely situated, and is a flourishing place, both in trade and manufactures.

1054. *Natchez*, the principal town of Mississippi, is a flourishing place of trade. *Newbern* is the largest town of North Carolina, and has a valuable trade with the West Indies.

1055. *Knoxville* and *Nashville* are the principal towns of Tennessee, and the seats of literary institutions. *Lexington* is a large and handsome town, the seat of Transylvania University. *Pittsburg* is at the head of navigation on the Ohio, and the centre of trade from the Atlantic to the Western States.

1056. *Newport* is beautifully situated on a fine harbor of great size and depth. *Burlington*, *Windsor*, and *Middlebury*, the principal towns of Vermont, are small but flourishing places.

1057. In the British Provinces, *Quebec* is the principal seaport. The lower town is on the banks of the river; and the upper town, strongly fortified, stands on the top of a promontory above it.

1058. *Montreal* is also an important place of trade, situated on an island in the St. Lawrence. Both these cities are built of stone, in the ancient European style.

1059. In Spanish America, or Mexico and Guatemala, the cities are generally built on a regular plan, with broad paved streets, furnished with sidewalks. Most of them are supplied with water by aqueducts, and the public squares are often adorned with fountains, as in Spain.

1060. *The public buildings*, especially churches, nunneries, and convents, are numerous and splendid. *The private houses* are seldom convenient or elegant. They are usually low, often only one story, and seldom exceeding

two stories in height, on account of the earthquakes and hurricanes to which these cities are subject. Lima, Quito, and Caraccas, have been almost destroyed by earthquakes.

1061. In most of these cities, the houses are *built* of brick or stone. In the cities of the Torrid Zone, on account of the heat, *the windows* are usually furnished with lattices, blinds, or curtains, instead of glass.

1062. A number of these cities are situated on ground so high, that they enjoy perpetual spring. Mexico, Puebla, Durango, and several others, are a mile and a half above the level of the sea.

1063. *Mexico* is one of the most populous cities of America, and one of the finest in the world in its situation and appearance.

1064. *Guatemala* is an inconsiderable place, and the cities of Central America are inferior to those of Mexico. The old city of Guatemala was destroyed by an earthquake.

III. APPLICATION OF GEOGRAPHY,

OR TRAVELS ON THE MAP.

1065. To discover whether you understand what you have learned, and know how to apply it, you must endeavor to travel on the map, and give an account of the objects you meet with. To answer the questions, you must remember what you have learned, or look back to the account of North America, and of Zones, Climates, Civilization, Government, and Religion.

Maps of N. America. — What course will you take from the eastern coast of the United States to Greenland? What countries and islands shall you pass, and to whom do they belong? What new objects shall you probably see on your voyage? (*See* ¶ 144.) What bay lies west of Greenland? What is the most northern passage from this bay towards the West, that has been discovered? How many degrees westward is Icy Cape?

As it is probable the ice will not permit you to go farther, you can return and examine Hudson's Bay.

What straits lead into this bay? What country lies South of these straits? What can you say of the people? (¶ 725.) What forts and trading-houses do you find on Hudson's Bay? What course will you take to reach the most western trading-house? How do you like the climate? (¶ 719.) What mountains are near you? Who occupy the coast West of these mountains? What articles of commerce shall you find among the Indians? (¶ 742.) How do the traders convey their furs? What course must you take to reach Montreal by water, passing over land from the Lake of the Woods to Lake Superior? What language shall you find most common in E. Canada? (¶ 748.)

Political Map of U. States. — What towns should you pass in going down to the mouth of the St. Lawrence?

You will find the banks of this river fertile, and lined with houses, forming almost a continued village.

Map N. Div. — Through what river can you pass into Lake Champlain? What communication is there between this lake and the Hudson River? What states lie East of the Hudson? How can you pass by water from the Hudson to Lake Erie? From L. Erie to the Ohio R.?

How will you go from New York to the Mississippi River and to New Orleans through the United States, on these waters and canals? (*See Navigation, p.* 162.) Through what rivers could the James River be connected with the Ohio?

Canals now unite Chesapeake and Delaware Bays, the Delaware River with the Raritan, which empties near New York, and Chesapeake Bay with Albemarle Sound, through the Great Dismal Swamp.

What is the course of inland navigation from Montreal to Edenton, N. C., by the help of these canals?

Begin at Portland, Maine, and describe the course through the seats of government of the states lying on the Atlantic, till you reach N. Carolina; and mention the states and towns through which you pass, and the rivers and bays you cross. Give the same account from N. Carolina to Florida. (*See Map of S. Div. of U. States.*)

What states and what seaports do you pass on the coast, in returning from St. Augustine by sea, as far as New York? and what islands? What states, ports, and islands do you pass, in going through Long Island Sound to Boston? (*See Map of Eastern States.*) To Nova Scotia?

If you wish to visit the western coast of America, you will be obliged to go round Cape Horn.

Describe the voyage, and mention the countries you will pass. (*See Map of the World and Map of North America.*) What is the first country of North America you reach after passing around Cape Horn? Describe your course along the coast to Alaska. What great river, with an American settlement on it, do you find?

It is usual with ships that visit the North-West Coast, to carry the furs they obtain to China, where they are very valuable. On their course, they often stop at the Sandwich Islands for refreshment.

Describe the course of these ships to Canton. How can they go to the United States, moving still westward, so as to complete their voyage round the world? If you do not wish to take so long a voyage, at what port in Mexico can you land nearest the capital? What do you find remarkable in Mexico? (*See p.* 218.) What gulf and sea should you cross, in going to Trinidad? What course will you take to go to New Orleans, and stop at the principal islands of the West Indies as you pass?

Maps of the N. and S. Div. U. States. — What is the situation of New Orleans? What states and places shall you pass in going up the Mississippi and Ohio to Pittsburg? What mountains must you cross in going from Pittsburg to Philadelphia? What is the first and what the last ridge? What is the direct course to Washington from Wheeling, on the Ohio? What places shall you find in passing up the Hudson River on each side? What on the Delaware? The Susquehannah? The Potomac? The James? *Map of E. States.* — What towns on the Connecticut River? The Thames? The Merrimac? The Kennebec? The Penobscot?

In what direction from Washington is Philadelphia? New York? Boston? Quebec? Hudson's Bay? Missouri? Cincinnati? New Orleans? (*Polit. Map of N. Am.*) Charleston? Mexico? The West Indies? In what direction is your own home from Washington?

SOUTH AMERICA.

I. 1066. South America *surpasses all other portions of the world* in the extent of its plains and basins, the length of its rivers, and, if we except Asia, in the height of its mountains.

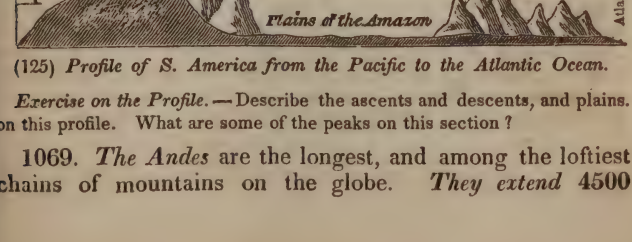
1067. It is a compact body of land, with few *bays or peninsulas*, and a small extent of *sea-coast* in proportion to its surface.

I. *Questions and Exercises.* — 1066. In what respects does S. America surpass other portions of the world? 1067. What can you say of its bays, peninsulas, and sea-coast? What is its comparative size? (*See* p. 83, ¶ 239.) What figure will enclose the greater part of it? (¶ 240.) *Phys. Map of S. America.* — On which continent is S. America? In what zones? How is it bounded? What is the most southern cape of S. America? The most northern? The most eastern and western? What straits cross it at the south?

I. HIGHLANDS.

1068. The Andes appear like *the spine or back-bone of South America*, and divide it into two declivities. *The western declivity* is a narrow tract between the mountains and the Pacific Ocean. *The eastern declivity* forms almost a triangle, whose eastern point extends to the Atlantic Ocean, embracing the greater part of South America.

The ascents and descents between the two oceans are represented in the following section, from the Pacific near Quito, to the Atlantic Ocean.



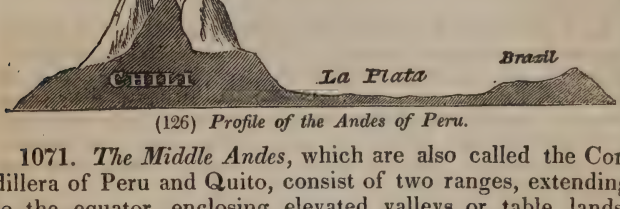
(125) *Profile of S. America from the Pacific to the Atlantic Ocean.*

Exercise on the Profile. — Describe the ascents and descents, and plains on this profile. What are some of the peaks on this section?

1069. *The Andes* are the longest, and among the loftiest chains of mountains on the globe. *They extend* 4500

miles in length, from the naked rocks of Cape Horn to the Isthmus of Panama, and spread from 50 to 100 miles in breadth. *They are called by the Spaniards*, "The Cordillera," (*Cor-dil-ye-ra*) or, The Chain.

1070. *The Southern Andes*, from Patagonia to Peru, form but a single range of mountains, and are generally of the second rank, in height.



(126) *Profile of the Andes of Peru.*

1071. *The Middle Andes*, which are also called the Cordillera of Peru and Quito, consist of two ranges, extending to the equator, enclosing elevated valleys or table lands, which have a fine climate and a large number of inhabitants. (*See the profile* 125, p. 227.) *They contain* the loftiest *peaks* of the Andes, and numerous *volcanoes*, some of which are the highest in the world.

1072. *The Northern Andes, or Cordillera of New Grenada*, in extending North from Quito, divide into three branches, whose separating valleys form the channels of the Rivers Cauca (*Ca-u-ca*) and Magdalena. (*See profile*, p. 238.)

I. *Questions and Exercises.* — 1068. How do the Andes appear? 1069. Describe them. How far do they extend? What are they called by the Spaniards? 1070. Describe the Southern Andes. 1071. The Middle Andes. What peaks and volcanoes here? Name some of them. (*See profile and map of the Andes on Polit. Map of S. America.*) 1072. Describe the Northern Andes.

II. 1073. *The Cordillera of Choco* on the coast, and that of *Quindiu* in the middle, — which are separated by the River Cauca, — are ranges of little elevation. They divide at the mountain knot of Antiochia; and terminate in the lowlands of the Magdalena River and Panama. On these lowlands, near the coast, we find the solitary but lofty group of *the Sierra Santa Martha.*

II. 1073. Describe the Cordillera of Choco and Quindiu. What mountain knot do they form?

1074. The eastern branch, or *Cordillera of Merida*, turns North-East to the coast of the Caribbean Sea, and then runs eastward, immediately along the coast, in the two parallel but less elevated ranges of Venezuela.

1075. The Cordillera of Merida contains lofty *peaks*, covered with perpetual snow. In one of its high valleys, or table lands, is the city of *Bogota*, 8700 feet above the sea; and between the lower ranges of Venezuela is the city of *Caraccas*, at an elevation of 2800 feet.

1076. *The high valley, between the two ranges of the Middle Andes*, is divided into several table lands, by mountain knots, or transverse ranges, which unite the principal ranges into one chain.

1077. *These table lands* are among the most agreeable and fertile parts of South America, and enjoy at all seasons a mild spring climate, in the midst of the Torrid Zone. On this account, they have always been the most populous regions of South America.

1078. *The most extensive of these table lands* is that which forms the republic of Bolivia. *It contains* large cities, whose streets are higher than the tops of the Pyrenees; and rich mines of silver are worked at a greater height than the snows of the Alps.

1079. *The mountain knots* which divide the table lands of the Andes are mountain lands, like Switzerland; and some of them much larger. Some are more elevated than the perpetual snows of the Alps, but, as they are situated in the Torrid Zone, still have a temperate *climate*, which renders them productive and habitable.

I. DECLIVITIES.

1080. *The western declivity of the Andes* descends by terraces or steps, from 20 to 100 miles wide, which are quite populous. *The narrow lowland* on the coast contains only the seaports.

1081. *The eastern declivity of the Andes*, if we trace it by the rivers, comprises the whole eastern portion of South America, or the vast plains, called llanos and pampas, (p. 98, ¶ 288–289,) which form the basins of the La Plata, Amazon, and Orinoco Rivers, and the two mountain lands of Brazil and Guiana.

I. 1080. What can you say of the western declivity of the Andes? Of the lowland of the coast? 1081. What does the eastern declivity of the Andes comprise?

1074. Describe the Cordillera of Merida. 1075. What peaks has it? What cities on its table lands? 1076. How is the high valley of the Middle Andes divided? 1077. What can you say of these table lands? Are they populous? 1078. Which is the most extensive? What does it contain? 1079. What can you say of the mountain knots of the Andes? How high are they? What is their climate?

II. 1082. The most eastern part of South America is covered chiefly by *the mountain land of Brazil*, which is from 1000 to 2000 feet above the sea. It is *traversed* by ranges of mountains, of which the following are the principal.

1083. On the borders of the Atlantic we find *the Sierra do Mar*, or Maritime Ridge, a range of the lowest rank. It *extends* from the La Plata, along the south-eastern coast, to Rio Janeiro, or, as some say, to St. Salvador.

1084. Between the coast and the River St. Francisco is *the Sierra Espinhaço* (*Espinasso*), the loftiest in Brazil. West of the St. Francisco is *the Sierra dos Vertentes* (*Se-erra dose ver-ten-tase*), or Ridge of the Water-shed, which divides the branches of the St. Francisco from those of the Amazon.

1085. *A branch of this chain* extends North-West of the sources of the La Plata, and *spreads into* the broad, barren plains, called the Campos Parexis. From the borders of these plains, the principal *rivers* of this region appear to *rise*.

1086. *The mountain land of Guiana*, or the group of Parima, North of the Amazon, consists of parallel mountain ranges, separated by longitudinal valleys.

1087. *It gives rise to* the River Orinoco, which finally encircles the greater part of it. *The highest peaks* are only of the third rank of mountains.

II. *Ex. Phys. Map of S. America.* — *Highlands.* — What mountains border the western coast of S. America? How many ranges in the southern part? (¶ 1070.) What is its course? How many ranges in the middle? How are the middle ranges connected? (*See* ¶ 1079.) What lies between them? (¶ 1076.) How many ranges in the northern portion of the Andes? What rivers divide them? Where does the western range, or Cordillera of Choco, terminate? The middle range, or Cordillera of Quindiu? What is the course of the eastern range? What mountain group N. of these on the coast? (¶ 1073.)

Divisions. — How do the Andes divide S. America? What is the form of the western declivity? Of the eastern? What mountain and table land do you find in the eastern part of S. America? What is the principal chain on the coast? What branch has it towards the N.? (¶ 1083.) What range W. of the Sierra Espinhaço, running N. and N-E.? What mountain land N. of the Amazon? What are its principal mountains called?

I. LOWLANDS.

1088. *The lowlands of South America lie chiefly* on the eastern declivity of the Andes, and *form* almost one connected plain, embracing those of Patagonia, La Plata, the

II. 1082. Where is the mountain land of Brazil? By what is it traversed? 1083. Where is the Sierra do Mar? 1084. The Sierra Espinhaço? The Sierra dos Vertentes? 1085. What can you say of the north-western branch of this chain? What rivers rise on the borders of the Campos Parexis? 1086. Describe the mountain land of Guiana. 1087. What stream rises in it? What is the height of its peaks?

Amazon, and the Orinoco, and lying between the Andes and the eastern highlands.

1089. *The plains of Patagonia* are little known, but appear to be deserts, either from cold, or from the barrenness of the soil. *The pampas* of La Plata, *and the llanos* of Orinoco, are immense savannas, already described. (¶ 289–90.)

1090. *The plains of the Amazon River* resemble the llanos in some parts; but a large part of them is called by the natives *the Bosques, or Selvas,* (*Forests,*) because they are covered with forests so thick that they are scarcely passable except on the streams.

I. *Qu. and Ex. Phys. Map of S. America.* — 1088. What can you say of the lowlands of S. America? 1089. Of the plains of Patagonia? In what part of S. America are these plains? Describe the pampas and llanos. Between what mountains on the W., and mountain land on the E., are the pampas of La Plata? Where are the plains of the Amazon? 1090. Describe these plains. In what part of S. America are the llanos of Venezuela? What stream passes through them?

II. *Rivers.* — What three great rivers and basins do you find E. of the Andes? Which appears to be the largest river of S. America? Where does it rise? What are its principal branches on the North? On the South? Where is the La Plata, the second river of S. America? What great branches form it? Where does its chief branch, or main stream, the Parana, rise? What other branches has it, and where? What river W. of it empties into a lake? What are the chief rivers South of it? What are the principal rivers on the eastern coast of Brazil?

Where is the third river of S. America, the Orinoco? Describe its course. What island lies at the mouth? Has it any communication with the Amazon? What rivers in the eastern part of Brazil? What two rivers in Guiana are most known? Where is the River Magdalena? (*See the Map of the Andes on Polit. Map S. America.*) Describe its course, and chief branch. What reason can you see on the map, why there are no large rivers on the western coast? What lakes in the southern part of Brazil?

I. PHYSICAL AND POLITICAL DIVISIONS.

1091. The great physical divisions of South America are the western declivity and table lands of the Andes; — and the eastern declivity, composed of the basins of the Orinoco, the Amazon, and the La Plata, and the plains of Patagonia. Each portion is divided into a number of states.

I. *Qu. and Ex.* — 1091. What are the great physical divisions of S. America? *Polit. Map of S. America.* — What states lie on the western declivity? Which of these extend E. of the Andes? What countries lie in the basin of the La Plata River? What in that of the Amazon? Of the

Orinoco? What countries lie N. of the Equator? What between the Equator and the Tropic of Capricorn? What S. of this tropic?

I. EXERCISES ON SITUATION.

Study the Physical Map of S. America until you can point out all it contains on the Political Map, and then answer the following questions.

Oceans. — Point out on the Political Map of S. America the Atlantic Ocean. The Pacific. On which side of S. America is each?

Seas, Gulfs, Bays, and Straits. — Point out the Caribbean Sea. Near what country, and in what direction from it? In the same way, point out and tell the situation of the G. of Darien; the B. of All Saints; B. of St. Mathias; B. of St. George; G. of Guaitecas; G. of Guayaquil; G. of Panama. Between what portions of land is the Strait of Magellan?

Capes. — Where is C. Gallinas? C. Orange? C. North? C. St Roque? C. Frio? C. Santa Maria? C. Antonio? C. Horn? C. and Peninsula of Three Mounts? C. Parina? C. St. Francisco?

Islands. — Point out and tell near what part of S. America, and in what direction from it, is Trinidad in 10° N. lat. Where is Trinidad in 21° S. lat.? Johannes I.? The Falkland Islands? Terra del Fuego? Staten Land? Desolation I.? Wellington I.? Chiloe Is.? I. of Juan Fernandez? I. St. Felix? Gallipagos Is.? Curaçoa, Buen Ayre, and Margarita? (*See Polit. Map S. A.*)

Mountains. — Point out and tell where are the Andes; Mts. of Parima, the Sierra do Mar; Sierra Espinhaço; Sierra dos Vertentes. Where is Mt. Chimborazo? Point out the situation and course of the Cordilleras of New Grenada, Choco, Quindiu, and Merida. (*See marginal map on Polit. Map of S. America.*)

Rivers. — Point out and tell in what country is the Amazon River; the La Plata; the Orinoco; the Cassiquiari. Where is the Magdalena? What is the name of its branch? On which side of the Amazon are its branches, Ucayale, Madeira, Tapajos, Xingu, and Tocantins? On which side are the Yapura and Negro? Where are the Essequibo and Surinam Rivers? The Paranaiba, St. Francisco and Doce? Where is the Uraguay? The Colorado? Parana? Paraguay? Pilcomayo and Vermejo? Salado?

Lakes. — Point out and describe the situation of L. Maracaybo; L. Titicaca; L. Palos; L. Mirim.

II. NAVIGATION.

1092. (*a*) We have already seen that *the coast of South America* has fewer bays and harbors, and less advantage for foreign commerce, than any other portions of the continents, except Africa. (p. 83, ¶ 241.)

1092. (*b*) *The means of inland navigation* surpass those of most other parts of the world; but, for want of industry and enterprise in the inhabitants, *it is now confined* almost entirely to natural streams.

1092. (*a*) What has been said of the coast of S. America? 1092. (*b*) What means of inland navigation has it?

1093. *The rivers of the western declivity* descend too rapidly to admit of any important navigation. But *the River St. Juan*, which falls into the Pacific Ocean from the lowlands North of the Andes, has been connected by a small boat canal with *the River Atrato*, which falls into the Gulf of Darien, and thus opens a boat navigation between the oceans.

1094. *The Rivers Magdalena and Cauca* are navigable for flat-bottomed boats, to the interior of New Grenada; and steamers now navigate the Magdalena for some distance.

1095. *The basin of the Orinoco* has great advantages for inland navigation by means of the river and its branches. Through the Meta branch, boats can pass even to the foot of the Andes.

1096. But only seven of the fifty *mouths of the Orinoco* are navigable; it is often difficult to find the way through its channels; and its rapid currents and counter-currents also obstruct navigation.

1097. *The Amazon* admits of ship navigation for 2000 miles. *The boat navigation* extends 3000 miles to the Pongo, or rapids of Jaen. But the uninhabited or savage state of the country has prevented it from being navigated.

1098. The large *branches of the Amazon* extend navigation to every part of its basin. By *the Cassiquiari River*, it is connected with the branches of the Orinoco.

1099. *The La Plata*, or Paraguay, opens to the ocean with an estuary, or broad mouth, 150 miles wide, and is said to be navigable 1000 miles to Assumption, and for boats 800 miles farther. *Its branches* extend the navigation through a large tract of country, and to the foot of the Andes.

1100. Of the smaller rivers of Brazil, *the St. Francisco* is navigable for some distance; and *others* serve to convey the produce of the mines to the

II. CLIMATE AND PRODUCTIONS.

1101. *The greater part of South America lies* in the Torrid Zone. *The plains have the climate and productions of* the Equatorial Region, while they furnish many useful *plants not found in other countries*, and of great value in commerce.

1102. *South America is surrounded by* oceans, and *watered* by countless streams. *This renders its climate* moist, and *its surface is generally covered* with rich vegetation, and forests so thick that it is difficult to pass through them.

1103. *In this way, it is generally preserved from* the burning heats

II. 1093. What can you say of the rivers of the western declivity? Of the R. St. Juan and Atrato? 1094. Of the R. Magdalena and Cauca? 1095. Of the basin of the Orinoco? 1096. Of its mouths? 1097. Of ship navigation on the Amazon? Of boat navigation? 1098. Of the branches of the Amazon? Of the R. Cassiquiari? 1099. What navigation does the R. La Plata afford? 1100. The St. Francisco? 1101. In what zone does S. America lie? What are the climate and productions of the plains? Has it any plants not found elsewhere? 1102. How is S. America surrounded and watered? How is its surface generally covered 1103. What effect does this produce on the climate of the plains?

of Africa, even in the plains. The *extensive table lands enjoy a climate* resembling a perpetual spring.

1104. *The southern parts* extend through the Warm and Temperate to the Cold Regions, and have the climate and productions of each.

1105. *The winds* which cross the continent *deposit* or drop *their moisture in rain* on the Andes. Hence, *in the latitude of the eastern or trade winds*, from the equator to 30° South latitude, *the eastern declivity of the Andes* has abundant rains and rich vegetation; while *the western declivity* has scarcely any rain, and is barren, and often desert, as in Western Peru.

1106. *In the regions South of the trade winds*, the westerly winds bring rain to the western declivity, as in Chili; while the eastern suffers with drought, as in La Plata.

1107. *The animals of South America* are generally inferior in size and ferocity to those of the eastern continent; but *the birds* are not surpassed in the variety and beauty of their plumage.

1108. The mountains furnish the llama and vicuna, which are valuable *beasts of burden*; and the llanos and pampas are traversed by vast herds of *wild cattle*, whose hides and horns are important articles of export.

1109. The mountains of South America abound in *mines* of gold and silver, which are the richest in the world; and the streams of Brazil bring down more diamonds and *precious stones* in their sands, than those of most other countries.

II. *Exercises on the Chart of Climates.* — What countries of S. America lie in the Equatorial Region? What must be their principal plants? What valuable plants belong especially to S. America? What countries are there in the Hot Regions, and what are their productions? What countries and climate South of these? What must be the climate of the southern part? Why should the climates of S. America be more temperate than those of the other grand divisions of the world? (*See* ¶ 1102.)

III. INHABITANTS.

1110. *South America was settled* by colonies of Spanish and Portuguese, which are now independent states. *Guiana* is divided between Dutch, English, and French colonists; and they still govern these civilized countries.

1111. *The interior is chiefly occupied by Indians*, in a savage state, almost unknown to Europeans.

1112. *The Araucanians* of Chili, and some other tribes of Indians in

II. How are the table lands? 1104. What can you say of the southern parts? 1105. What of the winds? In the latitude of the trade winds, what are the rains and vegetation on the eastern side of the Andes? What on the western? 1106. What is the state of the declivities, south of the latitude of the trade winds? 1107. What can you say of the animals of S. America? How are the birds? 1108. What beasts of burden are there? What are found in the plains? 1109. What mines are there in S. America? What precious stones are found? 1110. How was S. America settled? What have the colonies become? What can you say of Guiana? 1111. How is the interior inhabited? 1112. What is the character of the Araucanians?

South America, are much more civilized than those of North America, and are equally brave and warlike. These tribes, and some who were taught the Roman Catholic religion and the arts of civilization by the Jesuits, still remain *independent.*

1113. *The greater part of the population* of South America consists of Indians who have long been subject to the whites, and are almost like slaves in their character.

1114. *The middle classes* of society are chiefly Mestizoes, or children of the Spaniards who have intermarried with Indians.

1115. *The Mestizoes* are naturally intelligent and sprightly, and *some of them* have become very learned men. *Others* are herdsmen, resembling savages in their character and habits.

1116. *The higher classes* consist of European and American Spaniards and Portuguese, who are generally educated and wealthy, but indolent in their habits, and dissolute in their morals.

1117. The government of Spain formerly discouraged *instruction,* and the circulation of books, among the people of South America.

1118. Since the Spanish colonies have become independent republics, *new institutions* have been founded, and information has been more extensively spread by books and newspapers.

1119. But *the governments* are generally unsettled, *wars* are frequent, the people are not allowed to read *the Bible,* and these states are making little progress in *civilization.*

1120. South America is thinly *inhabited,* the general ignorance and indolence of the people prevent improvement, and there are few *roads, bridges, and canals.*

1121. Hence industry is discouraged in South America, by the difficulty of carrying produce to a market, as well as by the passion for mining, (which generally ruins those who undertake it,) and the unsettled state of most of these countries.

1122. *Agriculture and manufactures* are neglected, and some fertile, populous regions depend on other countries for their clothing and tools, as well as for their bread.

1123. The valuable products of South America will always give it important *commerce ;* but it is carried on chiefly by foreign ships.

III. *Exercises on the Moral and Political Chart.* — What is the religion of the countries of S. America? What is their state of civilization? What is the government of Brazil? What is that of the other states?

II. What is the state of the Indians instructed by the Jesuits? 1113. Who form the greater part of the population of South America? 1114. What can you say of the middle classes? 1115. What is their character? What can you say of those who have become herdsmen? 1116. Who form the higher classes? 1117. Did the government of Spain encourage learning in South America? 1118. What alteration has taken place in the state of knowledge? 1119. What is the present state of the governments? 1120. Is S. America thinly inhabited? What can you say of roads and canals? 1121. How is industry discouraged in S. America? 1122. What is the state of agriculture and manufactures? 1123. Of commerce?

NORTHERN COUNTRIES OF SOUTH AMERICA.

What countries of S. America lie N. of the equator? In what zone?

GUIANA.

Skinning the Boa Serpent. *Indian lying in a Hammock.*

(127) *Indians of Guiana, and the Boa Serpent.*

I. 1124. *Guiana* is inhabited in the interior by Indians; and the great boa serpent is found in its forests.

I. *Polit. Map of S. America.* — Where is Guiana? How is it bounded? How is it divided? What are the chief towns of British Guiana? Of Dutch Guiana? Of French Guiana? What remarkable animal is found here? (¶ 1124.)

II. 1125. *Guiana is generally* low and flat, traversed by canals like Holland, and has a very fertile *soil*. *The interior* rises into mountains, covered with impenetrable forests.

III. 1126. *The climate* is hot and unhealthy; but *the productions* are valuable. The greater part of *the population* consists of negroes. They are slaves, except in British Guiana, where they have been set free.

COLOMBIA.

The republic of Colombia formerly occupied the northern part of South America, but is now divided into the republics of Venezuela, New Grenada, and Ecuador.

VENEZUELA.

(128) *Effects of an Earthquake.*

I. 1127. *Venezuela is crossed by* the north-eastern branch of the Andes; and, like other countries near this chain, it is subject to violent earthquakes. In 1812, an earthquake destroyed the greater part of Caraccas, with 10,000 of its inhabitants, in a few minutes.

I. *Pol. M. S. A.*—On what sea is Venezuela? How is it bounded? What is its capital? How is it situated? (*See* ¶ 1075.) To what danger is it subject? (¶ 1127.)

II. 1128. Venezuela has a high *coast*, and *the lowlands* on the sea are rocky and barren, with a scorching climate. *The mountainous tracts* have the productions and climate of temperate countries. *The interior* spreads into vast fertile plains, and "seas of grass." (¶ 290.)

II. *Are there any rivers emptying into the Caribbean Sea? Why not? (*See map and* ¶ 1074, p. 229.) What river passes through Venezuela? What mountains in the southern part?

III. 1129. *The products* of Venezuela are generally those of the Equatorial Region, and cacao is especially valuable. *Agriculture* is in a poor state, and *arts* and *manufactures* are neglected.

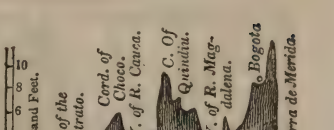
1130. *The commerce* of Venezuela is important; *the government* is established and just; and this country appears to be advancing faster in *civilization* than others in South America.

III. What seaports has Venezuela? What towns on the River Orinoco from its source to the point where it turns eastward? What below or E. of this point? What other places in the interior? What islands are there off the coast? Is there any passage for boats from Venezuela to the Amazon River? (1098)

* During the first course, the student ought to learn to distinguish every river, mountain, &c., on the political map; but if he cannot, he may look at the physical map for the questions marked **II.**

NEW GRENADA.

I. 1131. *New Grenada is traversed* by the three ranges of the Northern Andes, which give it a mountainous *surface*, as will be seen in this profile of the country from the Pacific Ocean to the llanos of the Orinoco River.



(129) *Profile of New Grenada.*

I. *Pol. M. S. A.* — How is New Grenada bounded? What is the capital? What is its surface? (*See* ¶ 1131, *and the profile.*)

II. 1132. *A large part of it consists* of elevated valleys and table lands, which give it a rugged *surface*. *It is level* only in the plains of the Orinoco, and at the mouths of the rivers.

1133. *The soil and climate* of New Grenada vary with the situation and height. *The low regions* have a rich soil, but a hot, unhealthy climate. *The high country* has nearly the same spring temperature in summer and winter; but it is also productive.

1134. *The lowlands* are rich in equatorial *productions;* while *the highlands* have the plants and fruits of temperate climates. The western declivity of the Andes has very rich *mines* of gold and silver.

II. *Note*, p. 237. What mountains pass through New Grenada? How many ranges do they form? What rivers separate the ranges?

III. 1135. *Agriculture* is badly managed, and *manufactures* are in a low state. *Commerce* is carried on from its ports by foreign nations; and its exports are valuable.

1136. *A canal* is proposed from the River Chagres to the Pacific Ocean, by which ships may cross the Isthmus of Panama.

III. On what mountains is the capital of New Grenada? What seaports has it on the Caribbean Sea? What on the Pacific Ocean? What are the ports on each side of the Isthmus of Panama or Darien? What city among the Andes? What other places do you find on the map?

MIDDLE COUNTRIES OF SOUTH AMERICA.

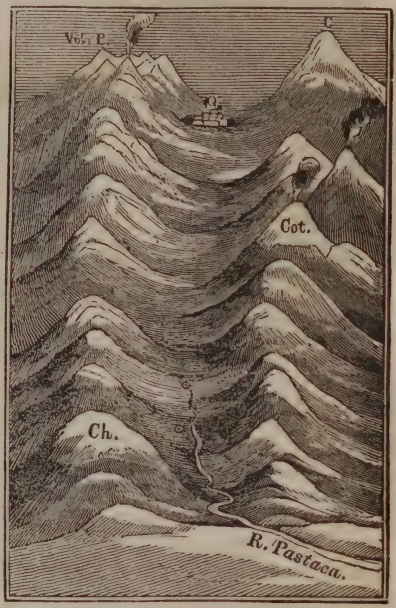
I. *Pol. M. S. A.* — What countries of South America lie between the Equator and the Tropic of Capricorn? In what zone are they?

ECUADOR.

I. 1137. *The inhabited portion of Ecuador* lies chiefly on the declivities, and in the lofty valleys and table lands of

the Andes. *The most remarkable table land* is that of Quito, with its mountains and volcanoes. (*See engraving.*)

Q. is Quito; *P.* Pichincha; *C.* Cayambe; *Cot.* Cotopaxi; and *Ch.* Chimborazo.



(130) *Table Land of Quito.*

1138. It appears to lie upon a region of internal fire, and *is subject to* frequent earthquakes.

I. *Pol. M. S. A.* — How is Ecuador bounded? What is its capital? How is it situated? (*See* ¶ 1137, *and profile* 125.) What volcano is near it? (*See engraving.*) What peaks S. of it?

II. 1139. *The only level portion of Ecuador* is East of the Andes; but *this is inhabited* chiefly by Indians in a savage state.

1140. Ecuador contains a great deal of fertile *land*. Its plains furnish *the plants* of the Equatorial Region, and its highlands those of Temperate countries. It produces some valuable *plants which are found in few other countries*, such as the cinchona, or the tree which yields the Peruvian bark.

II. What peaks of the Andes do you find in Ecuador? (*See Map of Andes, and fig.* 120.) What great river receives branches from Ecuador?

III. 1141. *The people, arts, manufactures, and commerce*, are in the same low state as those of New Grenada.

III. What seaports has Ecuador? What places among the mountains? What islands are there off the coast claimed by Ecuador?

PERU.

(131) *Lima and the Andes.*

I. 1142. *The part of Peru inhabited by civilized people* lies on the declivity and the table lands of the Andes, which extend along the coast in a lofty chain, in the rear of Lima.

I. *Pol. M. S. A.* — How is Peru bounded? What is its capital? Is Lima on the sea? What is its seaport? How is it situated? (¶ 1142.)

II. 1143. *The surface of Peru* is irregular, except in the plains East of the Andes, which are occupied by savages.

1144. *The soil* of the valleys of the streams, and of the table lands, is fertile. *The lowlands and western declivity* of the mountains are generally bare of vegetation, as *rain* seldom falls here; but *the eastern declivity* is well watered, and covered with thick forests. (*See* ¶ 1105.) In the South it has *the Desert of Atacama*, which is so dry as to be covered with salt.

1145. *The climate* is, therefore, dry as well as hot; but with good agriculture, this country would *produce* abundantly the plants of the Equatorial and Temperate Regions. (*See* ¶ 1103.)

1146. Peru has *mines* of gold, silver, and copper, and important *commerce* in these articles; but *knowledge, arts, and manufactures*, are in a low state.

II. *Note*, p. 237. — What chain of mountains behind Lima? Does Peru extend East of the Andes? To what river do branches flow from the eastern part? Do the Andes of Peru form one, or two ranges? (¶ 1071.) What is there between these ranges? (¶ 1076.) Where are the greater number of its inhabitants? (¶ 1077.) What desert is there on the coast?

III. What seaports on the coast of Peru? What places among the Andes?

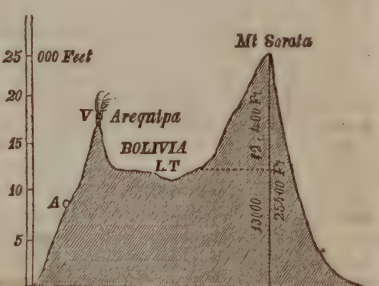
BOLIVIA

(132) *Travelling over the Andes.*

I. 1147. *Bolivia* was formerly called Upper Peru, and *lies* almost entirely on the table land between the ranges of the Andes. The people are obliged to travel and carry their goods over the mountains on mules, or llamas.

I. *Pol. M. S. A.*—How is Bolivia bounded? Where does it lie? What and where is its capital? What is the mode of travelling in Bolivia? (¶ 1147.)

II. 1148. *The surface of Bolivia* is rugged and mountainous. *The soil* is in some parts fertile, and in others desert. Its elevation gives it a temperate, and, in some parts, a cold climate. (¶ 486.) The adjoining profile shows the situation of the table land of Bolivia, between two ranges of mountains.



(133) *Profile of Bolivia.*

II. What lake does Bolivia contain? What rivers have branches rising in it? How high above the sea is the table land of Bolivia? (*See profile, and the scale of feet at the side, and also* ¶ 1078.) What cities on this table land? What great river rises in it? What smaller streams?

III. 1149. The most valuable *production* of Bolivia is the silver of its mines, which are among the richest in the world. These give it an important *commerce*, and it is also the centre *of trade* between La Plata and Peru.

BRAZIL.

(134) ***Forest in Brazil.***

I. 1150. *A large portion of Brazil lies* in the basin of the Amazon, and *consists* of vast plains. A part of these are llanos; and the remainder are *selvas*, or forests abounding in wild animals.

I. *Pol. M. S. A.* — How is Brazil bounded? What is its capital? For what is it remarkable? (¶ 1150.)

II. 1151. *The forests* are so filled with shrubs, and interlaced with strong vines running from tree to tree, that it is often difficult to pass through them; and they are known to few except the Indians.

II. What great river runs through Brazil? Has it many other streams? In what parts is it level? In what parts does it appear to be mountainous?

1152. *The south-eastern part of Brazil* is a mountain land. It *contains* valuable mines of silver and gold, and streams whose sands are rich in diamonds and precious stones.

1153. *The soil* of the valleys and lowlands of Brazil is very fertile. *The climate* is hot, but moist, and no country in the world is better fitted for all the valuable *productions* of the Equatorial Region.

III. 1154. *The people* are ignorant, indolent, and more fond of mining than of regular industry. *Agriculture* is so neglected, that the crops often perish after they are ripened. *Manufactures* are al-

most unknown; and the important *commerce* of Brazil is left to foreigners.

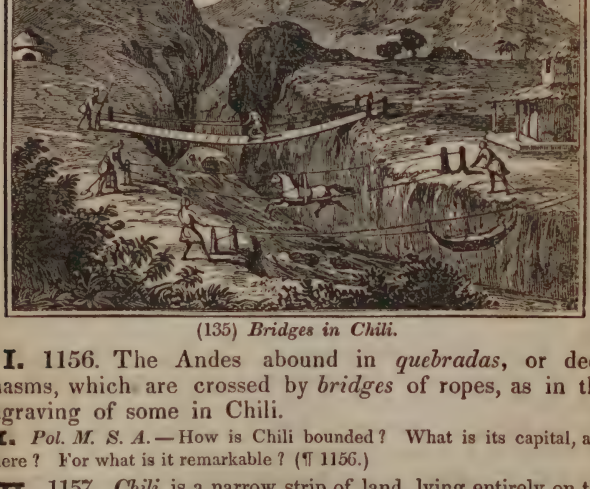
1155. *The fields, roads, and modes of living* of the people, are inferior to those of most civilized nations.

III. Has Brazil many towns in the interior? What are they? Are there any on the Amazon? What seaports lie south of Rio Janeiro? What between Rio Janeiro and Cape St. Roque? What ports between Cape St. Roque and the Amazon? What rivers are there in the mountain land at the South-East? What towns upon them? What is the government of Brazil? (*See Political Chart.*) What is the religion and state of civilization?

SOUTHERN COUNTRIES OF SOUTH AMERICA.

I. *Pol. M. S. A.* — What countries of South America lie South of the Tropic of Capricorn? In what zone are they?

CHILI.



(135) *Bridges in Chili.*

I. 1156. The Andes abound in *quebradas*, or deep chasms, which are crossed by *bridges* of ropes, as in the engraving of some in Chili.

I. *Pol. M. S. A.* — How is Chili bounded? What is its capital, and where? For what is it remarkable? (¶ 1156.)

II. 1157. *Chili* is a narrow strip of land, lying entirely on the western declivity of the Andes. Only a few *passes* over the mountains are known; and it is shut in *on the North* by the Desert of Atacama.

1158. It abounds in *volcanoes*, and is subject to frequent *earth-*

quakes; one of which, in 1822, raised the coast, for 100 miles, several feet above its former level.

1159. *The soil* is fertile, and watered by numerous short streams and abundant rains. (¶ 1106.) *The climate* is pleasant and healthy.

1160. *Chili produces* the fruits of the Warm and Temperate Regions in abundance; and in some parts, there are whole forests of fruit-trees.

II. How many ranges of the Andes in Chili? (¶ 1070.) Does the country extend E. of the Andes? Has it any large rivers? Why not?

III. 1161. Chili also contains valuable *mines*, and has important *commerce*. The people are more industrious than those of warmer countries; but *agriculture* and *manufactures* are still in a low state.

III. What seaports are there on the coast of Chili? What islands near it? What towns in the interior? What country of independent Indians South of it?

LA PLATA.

(136) *Herdsmen of La Plata.*

I. 1162. *The southern part of La Plata* spreads out in the vast plains called the pampas, where immense herds of wild cattle and horses feed, and are caught with a noose. *The guachos*, or herdsmen, live a wandering life, and are almost savages in their character.

I. *Pol. M. S. A.*—How is La Plata bounded? What great river passes through it? What is the capital, and where? What are the pampas? (*See* ¶ 1089.)

II. 1163. *The pampas extend* to Patagonia and the Andes, and contain many steppe-rivers which terminate in lakes. They are

often salt, from the dryness of the soil. *The northern parts* of La Plata are hilly and mountainous, but are not well known.

1164. *The soil* varies with the situation. *The valleys* of the streams are fertile and capable of cultivation; but some tracts are almost deserts.

1165. La Plata extends from the Equatorial to the Warm and Temperate Regions, and has *the climate and productions* of these regions in different parts. *The plains* are excessively hot in summer. *The winters* are mild even in the coldest parts.

III. 1166. La Plata was once, in some respects, more advanced in *civilization* than other parts of South America; but constant civil wars have stopped all *progress*, and almost destroyed its valuable commerce.

1167. *The chief exports* are obtained from the wild cattle and horses of the pampas, and consist of hides, horns, and tallow.

III. What rivers are there in the northern part of La Plata? What towns are there on the La Plata River? What in the interior, and where? Has any river a wider mouth than the La Plata? (*See profile*, p. 117.)

URAGUAY, OR MONTE VIDEO.

1168. *Monte Video, or Uraguay*, was formerly a province of La Plata, but is now declared independent. It has a fertile *soil*, a temperate *climate*, and a favorable *situation* for commerce.

I. *Pol. M. S. A.* — How is Monte Video bounded? What towns has it? What can you say of its soil, climate, and situation? (¶ 1168.)

PARAGUAY.

I. 1169. *Paraguay* was a part of the former Spanish province of La Plata, but has long formed a separate state, composed of Indians, governed by Spaniards.

I. *Pol. M. S. A.* — Where is Paraguay? How is it bounded? What is its capital? What can you say of it? (¶ 1169.)

II. 1170. They allow no strangers to visit it, and *we only know* that it is a level, fertile country. *It is remarkable for* the matte, or Paraguay tea, which forms an important article of *commerce* with the surrounding countries.

PATAGONIA.

I. 1171. *Patagonia* is a country thinly inhabited by savages, some of whom are remarkably tall. They are bold and ferocious, and accustomed to use horses. This country is little known, and appears to be cold and barren.

I. *Pol. M. S. A.* — How is Patagonia bounded? What islands lie South of it?

ISLANDS OF SOUTH AMERICA.

I. 1172. TERRA DEL FUEGO is a cold, dreary group of islands, but is inhabited by Indians in the savage state.

1173. THE FALKLAND ISLANDS have a temperate climate, and fine pasture for the cattle of the British colonists.

1174. THE GALLIPAGO ISLANDS, on the north-western coast of South America, are uninhabited, and are chiefly *remarkable* for the number of turtles found there.

They contain a "Sailor's Post-Office," — a chink in the rock, where sailors leave their letters for other ships to convey home.

1175. JUAN FERNANDEZ was the island where Selkirk was shipwrecked, who is called, in story, Robinson Crusoe.

I. *Pol. M. S. A.* — Where is Terra del Fuego? In what direction are the Falkland Islands from S. America? To what country of S. America are the Gallipago Islands nearest?

III. CITIES OF SOUTH AMERICA.

1176. In SPANISH SOUTH AMERICA, the cities are generally built on a regular plan, with broad paved streets, furnished with sidewalks like those in the United States. Most of them are supplied with water by aqueducts, and the public squares are often adorned with fountains.

1177. *The public buildings*, especially churches, nunneries, and convents, are numerous and splendid. *The private houses* are seldom convenient or elegant. They are usually low, often only one story, and seldom exceeding two stories in height, on account of the earthquakes and hurricanes to which these cities are subject. Lima, Quito, and Caraccas have been almost destroyed by earthquakes.

1178. In Lima, *the houses are built* of wood; in Popayan and Quito, of unburnt brick, and in most of the other cities, of brick or stone. In the cities of the hot countries, on account of the heat, the *windows* are usually furnished with lattices, blinds, or curtains, instead of glass.

1179. A *number of these cities are situated* on ground so high that they enjoy perpetual spring. Santa Fe de Bogota, Quito, and Popayan are nearly two miles above the level of the sea; and Caraccas, more than half a mile.

1180. *Caraccas* is an important commercial city, on an elevated plain near the coast. It is separated from its seaport, *La Guayra*, by mountains.

1181. *Bogota* is a large, well-built city, situated on a lofty plain, and surrounded by precipitous mountains. The Falls of Tequendama, in the River Funza, are not far from it. (*See* p. 114, ¶ 395.)

1182. *Quito* is only a few miles south of the equator. It is built at the foot of the Volcano Pichincha, on a declivity so steep that carriages cannot be used in many of the streets. It is traversed in some parts by deep chasms or crevices, over which the houses are built on arches

1183. *Lima* is one of the most wealthy and commercial cities of South America. It is distinguished for the magnificence of its public buildings and the rich ornaments of its churches.

1184. *Santiago* is finely situated in a valley near the Andes. From this city, and also from Lima, an extensive commerce is carried on with La Plata, by means of mules travelling over the Andes.

1185. *Buenos Ayres* is the chief city and centre of trade of the southern part of South America. The La Plata is here 30 miles wide; but the harbor is not safe, on account of the frequent violent storms.

1186. PORTUGUESE AMERICA, or BRAZIL, is extremely deficient in cities and towns. A few only are found on the coast, at considerable distances, and without any roads from one to another. The only towns in *the interior* are those established for mining. *The cities* generally resemble those of Spanish America, but are not so pleasant nor so well built.

1187. *Rio Janeiro* has one of the finest harbors in the world. In population and importance, it is probably the first city in South America; but in the comforts and improvements of civilization, it is inferior to many.

1188. *St. Salvador*, or *Bahia*, is next to Rio Janeiro in commerce and population. It is situated on a point of land, and, like Quebec, is divided into an upper and lower town.

1189. *The towns of* GUIANA are small, generally built of wood, in a neat and convenient manner. *Paramaribo* is regularly laid out, and its streets are shaded with orange, lemon, and tamarind trees, which in this climate are covered with perpetual verdure.

III. TRAVELS ON THE MAP OF S. AMERICA.

1190. You must now endeavor to travel on the map of South America, as you did in North America, (*see* p. 225, ¶ 1065,) and remember what you have read, without the help of references.

What is the most direct course from the eastern coast of the United States to La Guayra, the port of Caraccas? What islands do you pass? What ports and river shall you pass in going to Guiana? To whom does this colony belong? What places, islands, and capes do you pass, in going from Guiana to Pernambuco? What do you pass in going from this place to Rio Janeiro? What do you find remarkable in Brazil?

What towns will you pass in descending the River Paraguay from its sources to Buenos Ayres? What will you find remarkable?

What course will you take by sea from Buenos Ayres to Valparaiso, the chief port of Chili? What country and islands do you pass? What can you say of them? What places on the coast of Chili? Describe the situation of Chili. How do you like the Chilian bridges?

Describe your course from Coquimbo, in Chili, by sea to Lima, and the places you pass. How must you travel over the mountains to visit Cusco? In what direction from Cusco are the silver mines of Potosi? Which way will you go to Quito? To Bogota?

What course will you take from Bogota to Carthagena, Panama, and Porto Bello? And now find the shortest way to your home.

POLAR REGIONS.

I. 1191. *The Polar Regions include* the islands in the Arctic and Antarctic Oceans, lying in the Frigid Zones. *In every part of these regions*, the longest days and nights exceed 24 hours; and *in most parts*, the sun does not rise for several weeks or months in winter, and does not set for as many in summer.

1192. Hence *the winters* are intensely cold. *The coast* is always lined with ice. During the greater part of the year, *the seas* are frozen, and *the land* is covered with snow; so that it is difficult to explore these countries, and we are only acquainted with the coast.

ARCTIC REGIONS.

(137) *Aurora Borealis in the Arctic Regions.*

I. 1193. The long nights of the Arctic Regions are cheered by the *Aurora Borealis*, or northern lights, which enable the natives to pursue their occupation.

I. *Map of the World.* — Which appears on the map to be the largest body of land in the Arctic Regions? What islands lie West of Greenland? What islands in these regions lie North of the Eastern Continent? For what are the Arctic Regions remarkable? (¶ 1193.)

II. 1194. *The coasts of the Arctic Regions* are generally high and rocky, with bold promontories, covered with glaciers, which extend for a considerable distance into the sea. They have many

deep bays, gulfs, and *harbors;* but these are frozen during the greater part of the year.

1195. *The appearance of these regions* is very desolate. For a short period only, during the summer, a scanty but beautiful *vegetation* appears, which feeds a few wild animals; but very few vegetables can be cultivated.

1196. *The sea*, however, swarms with fish and amphibious animals, especially the whale, the seal, the walrus, and the sea-elephant, whose flesh and oil afford the inhabitants the means of subsistence, warmth, and light, during their long winter of darkness. (*See* p. 138, ¶ 540.)

AMPHIBIOUS *animals* are those which, like the walrus, and some kinds of turtle among us, live partly on the land and partly in the water.

1197. *Greenland* is the largest body of land we know in these regions. *Spitzbergen* is about 300 miles in length; and *Melville Island*, and several islands near it, about 100. *The whole Northern Ocean* seems to be an archipelago of islands, but the greater number of those yet visited are uninhabited.

GREENLAND.

I. 1198. *Greenland* is the only inhabited country of the Arctic Regions known to us, and resembles the rest in *surface and climate*. *The natives* are Esquimaux, who subsist chiefly by fishing for seals. (*See* ¶ 1196.)

I. *Pol. M. of N. America.* — How is Greenland bounded? What mountains do you find? How do the people subsist? (¶ 1196.)

II. 1199. The Greenlanders have no *government* among themselves, except that of families. They are generally Pagans, and are savages in their habits. A large number, who *have become Christians*, reside at the missionary stations established by the Moravians, and have become civilized in their customs.

1200. The king of Denmark *possesses Greenland*, and has established a number of *settlements* on the western coast for trading with the natives in the produce of their fisheries. *The eastern coast* is shut in with ice.

II. Do you find any rivers or mountains in the interior of Greenland named on the map? Why not? (¶ 1192.) What settlements do you find on the western coast, beginning at the South? Are there any settlements on the eastern coast?

ANTARCTIC REGIONS.

I. 1201. *In the Antarctic Regions, the sea* abounds in animals like those of the Arctic Regions, and many American *sealing vessels go there* to procure the skins and oil of the seals; but they have found no *inhabitants*.

I. *Map of the World.* — What lands in the Antarctic Regions lie nearest to S. America? In what directions? What land nearest to New Holland? What animals are sought and killed here? (¶ 1201.)

II. 1202. *The land thus far discovered around the South Pole* has the same general character with that of the Arctic Regions, but is still more desolate. Only a few islands were formerly known; but *since* 1819, detached portions of land have been discovered at various points, from the longitude of Cape Horn to that of Van Diemen's Land, which are now supposed to belong to an Antarctic continent.

1203. *South Georgia* and *the South Shetland Isles* were formerly very valuable for their fisheries; but the animals sought for have been destroyed or driven away, and the fishermen have discovered other portions of land where they were abundant, *S. E. of Cape Horn.* Of these, Graham's Land, Palmer's Land, and Enderby's Land, are the principal.

III. 1204. In 1840, *the American exploring expedition* discovered a long range of land, S. of New Holland, extending along the Antarctic Circle, from longitude 97° E., and visible some distance farther W., to longitude 165° E., a distance of nearly 70°, or, in this latitude, nearly 2000 English miles. A part of this was also discovered by *the French expedition* soon after. At a later period, *the British expedition* explored a portion of the same coast extending S. to lat. 78°, a distance of 500 miles; and all these navigators suppose it to belong to a continent surrounding the pole.

1205. *The coast* is high and mountainous. It is so covered and bordered with fields of ice, that it is difficult to land; but it is found to consist of granite and volcanic rocks. *Volcanoes* have been observed in the various portions of land already mentioned; and the British expedition discovered one in full activity, which they called Mt. Erebus, and another, extinct, which they called Mt. Terror, forming part of a chain of mountains from 9,000 to 12,000 feet high.

III. *Map of the World.* — Which way is Victoria Land from New Zealand? What volcanoes does it contain? What land due South of Van Diemen's Land?

EUROPE.

I. 1206. *The surface of Europe* is very irregular. Highlands and lowlands, valleys and plains, are mingled and divided, so that each portion must be described separately.

1207. *The principal physical divisions* are the northeastern lowland, occupying the eastern half of Europe; the central highlands, lying in the centre, between this lowland and the Atlantic declivity; and the peninsulas and islands on its coasts.

I. *Qu. and Ex.* — 1206. What can you say of the surface of Europe? 1207. What are its principal physical divisions? *Maps of World and Eu*

rope. — On which continent is Europe? In what zones? How is it bounded? What is the most northern cape? The most southern? The most western, in Portugal? What is the comparative size of Europe? (*See* p. 85, ¶ 248.) What figure will enclose the greater part of it? (¶ 249.) How large a part of it consists of peninsulas? (¶ 249.) Has it a large proportion of sea-coast? (¶ 250.)

I. NORTH-EASTERN LOWLAND.

1208. *The north-eastern lowland of Europe* is a vast region of waving plains, extending from the Arctic Ocean to the Black Sea and the Mountains of Caucasus, and from the Ural Mountains to the Baltic Sea and the central highlands. In this way *it forms* one extensive country, protected on all sides by mountains or seas. The following profile shows its situation and surface in latitude 65° North.

(138) *Profile of Northern Europe, in Latitude 65° North.*

Exercises on the Profile. — What highlands do you find in going E. from the Atlantic? What sea next? What terrace E. of the Baltic? How is the land from Finland to the Ural Mts.?

1209. *The Ural Mountains form* the eastern boundary of this lowland. *They consist* of three parallel ranges, extending South from the Gulf of Kara, until they are lost in the table land between the Caspian Sea and the Sea of Aral.

They are a low chain, but in some parts quite broad. *The Northern Ural* is almost a naked mass of rocks. *The Middle Ural* is the highest part of the chain, but is most easily passed. It is rich in mines, and is the most thickly inhabited. *The Southern or Woody Ural* supplies the fuel for the furnaces connected with the mines.

1210. *The chain of the Caucasus* forms a part of the southern border of the lowland. *It is* a loftier and broader chain than the Ural, but much shorter. *It consists* of several ranges, with deep chasms, and peaks of the first rank.

1211. *The north-eastern lowland has a narrow branch* running westward, along the southern shore of the Baltic Sea, and forming the passage to Western Europe, which is called the German lowland. *It is* a region of sandy plains and marshes, but has some tracts of fertile land.

1212. *It terminates, on the North-West,* in the peninsula of Denmark, which has the same character; and *on the South-West,* in the swamps of Holland, many of which are below the level of the sea.

I. *Qu. and Ex.* — 1208. What can you say of the north-eastern lowland? What does it form? 1209. What do the Ural Mts. form? What do they consist of? 1210. What can you say of the chain of the Caucasus? 1211. What branch has the N. E. lowland? Describe the German lowland. 1212. In what does it terminate on the N. W.? On the S. W.? *Phys. M. of Europe.* — What part of Europe does the N. E. lowland occupy? How is it bounded? (*See also* ¶ 1208—1210.) On what sea is the lowland of Germany? What river has a delta on the western part? Which way does the lowland peninsula of Denmark project?

I. CENTRAL HIGHLANDS OF EUROPE.

1213. *The central highlands of Europe extend* from the German lowland to the borders of the southern peninsulas, and from the Russian lowland to the western declivity of France.

1214. *These highlands may be divided* into three portions — the eastern or Carpathian highlands, East of Bohemia; the middle or Alpine highlands, between these and the Rhine; and the western or French highlands, West of the Rhine.

I. *Qu. and Ex.* — 1213. How far do the central highlands of Europe extend? 1214. How may they be divided? *Phys. M. of Europe.* — In what part of the central highlands are the Alps? What mountains N. of the Alps? What basin lies N. of the Alps, or in the Alpine highlands? What mountains in the eastern highlands? What mountains in the French highlands W. of the Rhine?

II. *Carpathian Highlands.*

1215. *The Carpathian highlands form* a triangle, lying between the Russian lowland and the valley of the River Danube, and extending from the lower part of the Danube to the sources of the River Oder, and other streams which separate them from the basin of Bohemia.

1216. *They comprise* the mountains and table land of Transylvania, the table land of North-western Hungary, and the basin of Bohemia.

III. *The Alpine Highlands.*

1217. *The Alpine highlands extend* from the lowland of Lom-

C. H. II. 1215. Describe the Carpathian highlands. 1216. What do they comprise?

bardy, on the S., to that of Germany on the N., lying between the Rhine and the lowland of Hungary. *The Alps* form the main body of these highlands, and are the loftiest chain in Europe *They extend*, in the shape of a crescent, from the Gulf of Genoa to the Adriatic Sea.

1218. *The Western or Maritime Alps*, which run North from the Mediterranean Sea, consist of *a single range* of mountains of the second rank, which separate France from Italy.

1219. *The Middle Alps* extend East from the valley of the Rhone, in several ranges, through Switzerland. They contain the principal parts of this *chain*, (of which Mt. Blanc is the highest,) the most extensive fields of ice and snow, and the most sublime and beautiful scenery.

1220. *The Eastern Alps* commence in Tyrol, or Austrian Switzerland, and spread into a number of ranges, which terminate in the mountains of the Grecian Peninsula.

1221. The Alps have a steep *declivity towards the basin of the River Po* on the South; but *towards the North*, they descend gradually, in three terraces or table lands.

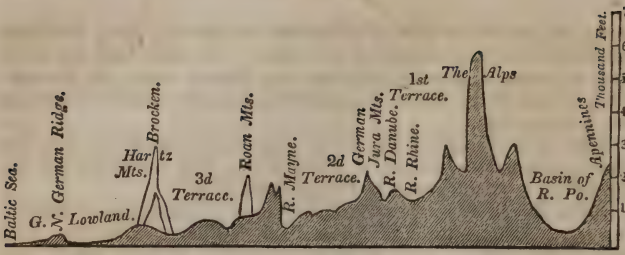
1222. *The Jura Mountains*, which lie next North of the Alps, are a low range composed of limestone, extending north-east from the Lake of Geneva, across the Rhine, to the Danube. That part which lies S. W. of the Rhine is called the *Swiss or French Jura*, and the other portion, north-east of the Rhine, the *German Jura*, or *Rauhe* (*row-a*) *Alp*.

1223. *The first terrace of the Alps* is the Swiss Bavarian table land, lying between the Alps and the Jura, and *containing* the northern part of Switzerland, and the southern part of Bavaria. *It is* a cold and somewhat rugged region, but still rendered *productive* by the industry of the inhabitants.

1224. *The second terrace* extends from the Jura to the valley of the River Mayne. *It contains* the northern parts of Bavaria and the kingdom of Wurtemberg, which have a better *climate and soil* than the first terrace.

1225. *The third terrace* descends gradually from the River Mayne to the German lowland, and *contains* Saxony, and the Saxon and Hessian states. It has a milder *climate* and a great variety of *soil*. The profile on page 254 shows the mountains and terraces of the Alpine highlands.

A. H. II. 1217. Where are the Alpine highlands? What can you say of the Alps? How far do they extend, and in what shape? 1218. Describe the Maritime Alps. 1219. The Middle Alps. 1220. The Eastern Alps. 1221. Describe the declivity of the Alps. 1222. Where are the Jura Mts.? Which is the Swiss Jura? The German Jura? 1223. What is the first terrace of the Alps? What countries does it contain? What can you say of its climate and productions? 1224. Describe the second terrace. Its countries. Its climate and soil. 1225. Describe the third terrace of the Alps. What is its climate and soil?



(139) *Profile of the Alpine Highlands, from the Baltic Sea on the North to the Basin of the River Po.*

Exercises on the Profile. — What is the first chain of mountains N. of the Alps? What terrace lies between the mountains? How far does the second terrace extend? The third terrace? What mountains in Northern Germany? What ridge of land?

1226. East of these terraces is *the basin of Bohemia and Moravia*, separated from them by the Bohemian Mountains. *It consists* of table lands and terraces of moderate elevation, *and contains the states* of Bohemia and Moravia, which now belong to the Austrian empire.

It is surrounded by mountains, which made it, before the Reformation, an asylum for the Moravian Christians.

1227. *The Saxon Erzgebirge*, or Ore Mountains, form the northwestern border of Bohemia. *They are* a low range, but are celebrated for their rich *mines*, and *inhabited* almost to their tops.

Berg, in German, is a mountain; *ge-bir-ge* (*ge-beer-ge*), mountains, or a chain of mountains; and *erz* (*ertz*) means ore.

1228. *On the West, the terraces of the Alps are bordered* by the Schwartzwald, or Black Forest Mountains, which separate them from the valley of the River Rhine.

II. *Western or French Highlands.*

1229. *The Western or French highlands lie* West of the River Rhine, and may be divided into northern and southern. *The northern highlands of France* consist of the Vosges and several other mountain ranges and table lands of moderate height, which give rise to its northern rivers.

Vosges is pronounced *Vozh*, — *ozh* being sounded like *oz* in *ozier*.

1230. *The southern highlands of France* comprise the table land

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II. 1226. What basin lies east of these terraces? What does it consist of? What countries does it contain? 1227. Where are the Saxon Erzgebirge? (*Ertz-ge-bir-ge.*) What does this name mean? 1228. How are the terraces of the Alps bordered on the west? **F. H.** 1229. Where do the French highlands lie? What do the northern highlands of France comprise? 1230. The southern?

of Auvergne (pronounced *O-vairn*), which is covered with extinct volcanoes, and the ranges of the Forez Mountains and the Cevennes.

1231. *The Pyrenees*, which separate France from Spain, are a grand chain of mountains, but less lofty and rugged than the Alps. *The northern declivity*, towards France, is gradual and fertile; but *the Spanish declivity* is steep and rugged, and the passes are few and difficult.

I. LOWLANDS AND DECLIVITIES OF CENTRAL EUROPE.

1232. *The lowlands connected with Central Europe consist* of the Atlantic declivity, containing a part of France and Belgium, and the valleys of its rivers.

1233. *The lowland of France and Belgium* is a declivity, extending from the Pyrenees to the River Scheldt. *It is generally* a waving, fertile country, watered by numerous streams, which serve also as channels of navigation.

1234. *The valleys of the rivers* are generally very fertile, especially those on the lower course of the Rhine and Rhone, and that of the River Po, or the lowland of Lombardy.

I. *Qu. and Ex.* — 1232. What lowlands are connected with Central Europe? 1233. What can you say of the lowland of France and Belgium? What of its surface and soil? 1234. How are the river-valleys?

I. PENINSULAS AND ISLANDS.

1235. (*a*) *The peninsula of Denmark*, or Jutland, belongs to the German lowland already described. *Each of the remaining peninsulas and islands* has its own system of highlands and lowlands, and will be described separately.

I. *Qu. and Ex.* — 1235. (*a*) To what lowland does the peninsula of Denmark belong? What can you say of the other peninsulas and islands? *Phys. Map of Europe.* — What peninsulas are there in the northern part of Europe? What is the most northern point of the Scandinavian peninsula? What large islands south-west of it? What peninsulas in the South of Europe? What is their most southern cape? What peninsula in the Black Sea? What large islands in the Mediterranean Sea? What in the Baltic Sea?

II. EXERCISES ON THE PHYSICAL MAP OF EUROPE.

What seas are there around the peninsulas and islands in the northern part of Europe? What two gulfs in the Baltic? What are the straits or sounds called which lead into the Baltic Sea? What seas around the

II. 1231 What can you say of the Pyrenees? Of its declivities?

southern peninsulas of Europe? What gulfs in the Mediterranean? What straits lead into the Mediterranean? What straits lead into the Sea of Marmora? What straits and channel separate England from France?

Highlands. — What do you find the surface of Europe in its centre, and how named? What lowland N. E. of the central highlands? What branch N. of them? What W.? What on the S.? Of what physical divisions does the remainder of Europe consist?

Central Highlands. — What mountain chain forms the most southern portion of the central highlands? How many terraces in the gradual declivity towards the N.? (*See* ¶ 1221—5.) What mountains next N. of the Alps? What terrace lies between these chains? What terrace N. of the Jura Mts.? (¶ 1224.) What basin occupies a part of it? Describe the third terrace and its mountains. (¶ 1225, *and profile.*)

What mountains form the border of the central highlands on the N. E.? What name is used to comprise the whole system of mountains E. of the middle or Alpine highlands? (¶ 1214.) Describe the Carpathian system. (¶ 1215.) What are its chief mountains?

What highlands lie West of the River Rhine? (¶ 1229.) What mountain range is next the Rhine? What table lands in the N.? What ranges and table lands in the S.? (*See also* ¶ 1230.)

What large river-valley, with its terraces and lowlands, penetrates the central highlands on the E.? What other in the western part of these highlands?

Rivers. — What large river rises in the central highlands of Europe which flows towards the E.? What two others flowing N. W. and S. W.? What river flows from the southern declivity of the Alps? What considerable rivers flow into the Black Sea E. of the Danube? What into the Sea of Azof? What rivers E. of the Rhine flow from the northern declivity of the highlands? Into what branches of the ocean? What streams next S. of the Rhine? What streams flow from the western declivity of the highlands, and where do they empty?

In what ridge of land do most of the streams of the north-eastern lowland rise? Into what seas do they flow?

Describe the source of the Danube, and its course in its upper, middle, and lower portions. What branches has it on the right or southern bank? What on the left or northern bank? Where does it empty, and by what kind of mouth? What is its rank? Describe the Rhine in the same manner. The Meuse. The Scheldt. The Rhone. The Po.

Describe in the same manner the rivers flowing from the northern declivity of the central highlands. Which of these rivers belong to the basin surrounding the Baltic Sea? Describe those belonging to the same basin in the N. E. lowland. What rivers empty into the Baltic from the Scandinavian peninsula? What into the Skager Rack and Categat? What streams of the continent empty into the N. Sea and British Channel? What from G. Britain? (*The Tweed and Forth empty into it from Scotland.*) What streams are there on the northern declivity of the north-eastern lowland? Describe them. What on the southern declivity? Into what seas do they

empty? Where do the principal or western branches of the Volga rise? The eastern? Describe the Volga. The Don. The Dnyester (pronounced *Dn-yes-ter*). The Dnyeper (*Dn-yep-er*). What river is named in the Grecian peninsula? What in the Italian peninsula? What in the Spanish peninsula, on the E.? What on the W.?

Lakes. — What lakes do you find in the north-eastern lowland? What in Scandinavia? In what countries in the N. of Europe are lakes numerous? Are there any among the Alps? (*The Lake of Geneva is an expansion of the Rhone, and Lake Constance, of the Rhine.*) Do you find any large lakes in the southern peninsulas of Europe, or on the Atlantic declivity?

I. PHYSICAL AND POLITICAL DIVISIONS.

1235. (*b*) Europe is remarkable for the number of its *physical and political* divisions. The principal have been described, pp. 87, 88, and should now be reviewed on the maps.

I. *Qu. and Ex.* — 1235. (*b*) What can you say of the divisions of Europe? What are its chief physical divisions? (¶ 1207.) *Maps of Europe.* — Compare the Physical and Political Maps of Europe, and mention what country occupies the north-eastern lowland. What countries occupy the northern peninsulas? The southern? The British Isles? What countries lie on the western declivity of Central Europe? On the north-western? What countries do you find in the central highlands? What on the northern declivity, or the N. German lowland?

I. EXERCISES ON SITUATION.

Oceans and Seas. — After studying the Physical Map of Europe, point out on the Political Map the Atlantic Ocean — The Arctic — The North Sea — The Baltic — The White — The Caspian — The Black — The Sea of Azof — The Sea of Marmora — The Mediterranean.

Gulfs and Bays. — Point out in the same way the B. of Biscay — G. of Bothnia — G. of Finland — Archipelago — G. of Venice.

Straits. — In the same manner point out the following straits, and mention what waters are connected by them: Str. of Gibraltar — Dardanelles — Str. of Constantinople — Cattegat — Skager Rack — Str. of Dover — North Channel.

Capes. — In what country, and in what part of it, is Cape North? C. Matapan? C. St. Vincent? C. Clear? The Naze? What are the principal capes of Great Britain? Of France? Spain? Italy?

Peninsulas. — Point out the following peninsulas, and mention what countries are situated on them: The Scandinavian. That of Denmark. The Spanish. The Italian. The Grecian.

Islands. — Near what country of Europe, and in what direction from it, are the following islands situated: Great Britain — Ireland — Iceland — Corsica — Sardinia — Sicily — Candia? Point out and name the other

islands in the Mediterranean. The islands N. of Scotland. Those in the Baltic Sea. Those in the British Channel.

Mountains. — Where are the Pyrenees? The Alps? The Carpathian Mts.? The Caucasus? The Ural? Dofrafield Mts., or Scandinavian Alps? What ranges do you find in Great Britain? What in France? What in Germany? Switzerland? In Russia? Greece? Italy? Spain and Portugal? Where is Mt. Vesuvius? Mt. Etna? Mt. Hecla?

Rivers. — What countries are traversed or separated by the following rivers? The Volga — The Don — Dnyeper — The Dnyester — The Danube — The Po — The Rhone — The Ebro — Guadalquivir — Tagus — Douro — Garonne — Loire — Seine — Scheldt — Meuse — Rhine — Elbe — Vistula — Oder — Niemen — Duna — Neva — Onega — Dwina — Petschora — Ural — Thames. In what country is each of the following branches? The Mayne — Inn — Drave and Save — Bug — Pruth.

Lakes. — In what country is each of the following lakes? Ladoga, Onega, Peypus, and Ilmen? Constance and Geneva? Wenner, Wetter, and Maelar?

Relative Situations, or Courses and Bearings. — In what direction from London is Paris? Rome? St. Petersburg? Edinburgh? Which way from England is Spain? What is the course from Madrid to Naples? Naples to Constantinople? About what latitude are these three last cities? What city in the U. S. has about the same latitude? Which way from St. Petersburg is Constantinople? Which way is it from Paris to Vienna?

II. NAVIGATION.

1236. *Europe* is so much penetrated by branches of the sea, that its *sea-coast* is more extensive, in proportion to its surface, than that of any other part of the world. *Almost every part* of it has direct communication with the ocean, as well as with surrounding countries, by means of its seas and gulfs.

1237. But *it is also traversed* by numerous rivers, connected by canals, which extend the navigation to the inland regions. By this means, *boats can pass* through the body of Europe, from the southern to the northern seas, and from the Mediterranean to the Atlantic.

1238. *The rivers on the western declivity of France and Belgium*, afford navigation to the foot of the highlands. *The passes at the highlands* are so low, that all the great rivers of France are connected by canals with the Rhone and the Rhine, and thus with the Mediterranean and the central highlands.

1239. *The Rhine and the Rhone* are navigated to the borders of Switzerland; and for the greater part of this distance, by steamers.

N. II. 1236. How is the sea-coast of Europe? What can you say of almost every country? 1237. What other channels of navigation has it? How far can boats pass through Europe? 1238. What can you say of the rivers of the western declivity? Are they connected? How? 1239. What can you say of the navigation of the Rhine and the Rhone?

They are connected by a canal, and thus furnish another communication through the western part of Europe, from the Atlantic and North Sea to the Mediterranean.

1240. *The rivers of the German lowland* are navigable through the greater part of the lower terrace of the Alps. (¶ 1225.) *A chain of canals* from the Elbe to the Vistula opens the navigation from the North Sea, across Prussia, to the interior of Russia and the Gulf of Finland.

1241. The Niemen, the Vistula, and the Dwina, are connected by canals, with the Dnyeper (*Dn-yep-er*); and in this way, the boat navigation is extended from the Baltic to the Black Sea.

1242. *The Volga and its branches* afford navigation for boats, for 2000 miles, from the Caspian Sea to most parts of Middle and Southern Russia.

1243. *It is also connected by canals* with the Don and the Northern Dwina, and with Lake Ladoga and the River Neva, so that Russia may be traversed by boats from the Black and the Caspian, to the Baltic and White Seas.

1244. *The Danube and its branches* afford navigation from the Black Sea to the heart of the central highlands; and steamers ascend some distance above Vienna.

1245. *The peninsulas and islands of Europe* abound in bays and harbors, which give them the best advantages for foreign commerce. *All except Denmark* are so mountainous, that the rivers are too rapid for inland navigation.

1246. *A canal across the sandy isthmus of Denmark, from Kiel to the River Eyder, and another from the Cattegat,* at Gottenburg, to Stockholm, furnish a passage for ships from the North Sea to the Baltic, without going through the sound at Elsinore.

II. CLIMATE AND PRODUCTIONS.

1247. *Europe lies* entirely in the Temperate Zone, but it has a milder *climate* than other parts of this zone, for reasons already given. (*See* ¶ 479, 489.)

1248. *The coarse grains and potato are cultivated, and dwarf trees* grow as far North as Hamersfert, on the coast of Norway, in latitude 71° North. *In North America*, scarcely any plants, and no human beings, are found in this latitude.

1249. *Northern Europe, therefore, has the climate and productions*

II. 1240. Of the rivers of the German lowland? Of their canals? 1241. How is navigation extended to the Black Sea? 1242. What can you say of the Volga? 1243. With what streams is it connected by canals? 1244. How far is the Danube navigable? 1245. What can you say of the peninsulas and islands of Europe? 1246. What canal connects the Baltic and North Seas? **C. & P.** 1247. In what zone does Europe lie? How is its climate compared with others? 1248. How far N. are the coarse grains and potatoes cultivated? What do you find in this latitude in N. America? 1249. What are the climate and productions of Northern Europe?

of the cold regions; but *the crops* are so scanty and uncertain, that the people are often obliged to mix the ground bark of trees with grain, to make their bread.

1250. *South of latitude* 60°, the crops are more sure, and wheat begins to grow. *In latitude* 50°, we find the harvests and fruits of the Temperate Regions. *In North America, in the same latitude*, only a few vegetables can be cultivated.

1251. *The southern peninsulas of Europe* have the climate of the Warm Regions, which extend here to 45° North latitude, or 9 degrees North of the same region in the United States, and produce finer fruits.

1252. *The most southern lowlands* of these peninsulas have most of the productions of the Hot Regions, although the temperature is not so high.

1253. The southern peninsulas rarely have snow, except upon the mountains; but *the winter* is the season of rain. *The summer* is dry and hot, and the sky is constantly clear, as in the finest months of the year in the United States.

1254. *In the western part of Europe*, North of latitude 45°, the climate is rendered moist by the prevailing winds from the Atlantic Ocean. (¶ 489.) *The winters* are less severe than in the United States; but *the summers* are less hot, the sky is more clouded, and rain more frequent.

1255. In consequence of the moisture, and the want of sunshine, *the fruits and crops* do not always ripen, and the poor have often suffered, and great numbers perished, with famine.

1256. *In Sweden and Russia*, the climate is more dry, the winters severe, and the summers hot. *Grain and fruits* are not found so far North as in the western countries. *The climate resembles* that of the interior of North America, but is still much warmer.

1257. *Central Europe*, including Germany and Switzerland, has the climate of elevated regions, varying with the height of the country.

II. *Exercises on the Chart of Climates.*— In what regions does Europe lie? What parts of it are in the Frozen Regions? What productions have they? What countries in the Wintery and Cold Regions? What must be their productions? In what regions are the middle countries of Europe, and what are their productions? (*The wine grape does not grow in England, Belgium, and the North of France, on account of the dampness of the*

II. How are the crops? 1250. What do you find S. of latitude 60°? What in latitude 50°? How is it in N. America in the same latitude? 1251. What can you say of the climate and productions of the southern peninsulas? 1252. How are their most southern lowlands? 1253. Do the southern peninsulas have snow? How are the winters? The summers? 1254. How is the climate in the western part of Europe? The winters? The summers? 1255. What effect has the moist climate on the fruits and crops? 1256. How is the climate of Sweden and Russia? The grain and fruits? 1257. How is the climate of Central Europe?

climate.) What parts of Europe are in the Warm Regions? What fruits and other plants do they produce, which are not found in the other regions?

In what part of Europe do you find grain farthest North? In which part must we expect the mildest climate, in the East or the West? (*See* ¶ 480.) Where shall we find the coldest winters and hottest summers?

III. INHABITANTS.

1258. *The inhabitants of Europe* belong to the European race, except the Laplanders and Samoiedes on the North-East, and the Tartars on the South-East. These tribes belong to the *Asiatic race*, and are half-barbarous.

1259. *The people of the European race are divided* into three families of nations — the Sclavonic, the Romish, and the Teutonic or German. *Each of these families* has languages strongly resembling each other, but differing from those of other families. (*See* ¶ 562.)

1260. *The Sclavonic family inhabit* the eastern part of Europe, beyond the borders of Germany and Sweden, and retain something of the character of the people of Asia, from which they came.

1261. They profess the Christian *religion*, and are generally of the Greek church, but are less advanced in *knowledge and arts* than the other families.

1262. *The Roman* family occupy the southern peninsulas and France. They are almost all Roman Catholics *in religion*. *The people* are kept in ignorance, for want of schools and of the Bible. *In knowledge and arts*, they are superior to the Sclavonic family; but, except in France, they are generally inferior to the German family.

1263. *The nations of the Sclavonic and Roman families* have generally been subject to absolute monarchs; and France is the only one in which a free government is fully settled.

1264. *The Teutonic or German family inhabit* Central and Northern Europe, and the British Isles. *In religion* they are generally Protestants.

1265. *In most of these nations*, schools are provided for all; the Bible is generally read; and the government is free. They excel all other nations of Europe, except France, *in science and arts; and the people* are much superior to the French in education.

1266. Europeans are the chief *manufacturers* for other parts of the world; and their manufactures are generally superior to those of all other countries, except those settled by them.

1267. Europe has peculiar *advantages for commerce*, as already stated, from its central *situation*, (¶ 157,) and from the extent of its *sea-coast*, (¶ 250;)

I. III. 1258. To what race do the inhabitants of Europe belong? What tribes belong to the Asiatic race? 1259. How are the people of the European race divided? 1260. Where do we find the Sclavonic family? 1261. What is their religion? What is the state of the arts and knowledge? 1262. Where do the Roman family reside? What is their religion generally? How are the people? What is the state of knowledge and arts? 1263. How are the nations of the Sclavonic and Roman families governed? 1264. Where do we find the German family? What are they in religion? 1265. What can you say of most of these nations? 1266. Do Europeans manufacture for other parts of the world? 1267. How are they in commerce?

and its *inhabitants and their descendants* have long been the most commercial and enterprising people in the world. "Its sails whiten every sea; and its languages are heard in every port on the globe."

1268. *Europeans discovered* the new world of America and Oceanica, and *the inhabitants of the United States*, and most parts of America, are their descendants. They have established *colonies* in the most distant countries; and Europeans and their descendants not only cover America, but are beginning to form large colonies in Asia, in Africa, and in Oceanica.

COUNTRIES OF EUROPE.

I. 1269. When we sail North-East from the United States, *the first country which we find in Europe* is the kingdom of Great Britain and Ireland, or the British Isles, — the land of our forefathers; and on the continent, *East of these*, are the kingdoms of Denmark, Norway and Sweden, and the empire of Russia, which are the northern countries of Europe.

1270. *South of the Baltic Sea*, are Holland, France, and other countries occupying the middle regions of Europe; and next to these, the southern peninsulas of Europe.

KINGDOM OF GREAT BRITAIN AND IRELAND.

I. 1271. *The United Kingdom of Great Britain and Ireland consists of* these two islands and many smaller ones around them, and is one of the most powerful states of Europe. *The Island of Great Britain is divided* into England and Wales on the South, and Scotland on the North.

I. *Political Map of Europe.* — Which are the two largest of the British Isles? What divisions do you find in Great Britain? What islands are there W. and N. of Scotland? What in the Irish Sea? What in the English Channel? (*All these belong to Great Britain.*)

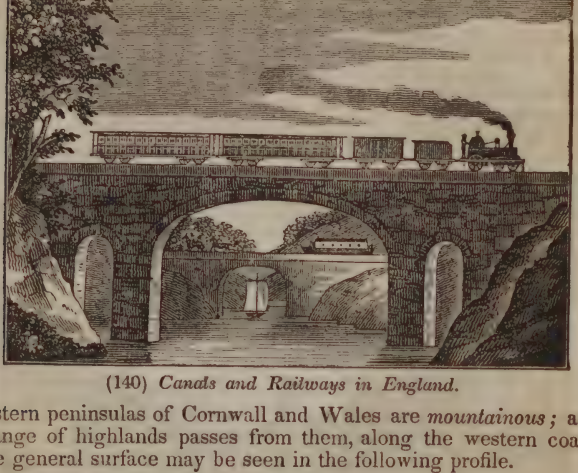
ENGLAND AND WALES.

I. 1272. *England is remarkable for* its fine roads and bridges, and also for its numerous canals and railways, which often pass through mountains and over rivers.

I. *M. of Great Britain.* — How is England bounded? What channel and straits separate it from France? What is its capital? For what is it remarkable? (¶ 1272.)

II. 1273. *The surface of England* is generally level; but the

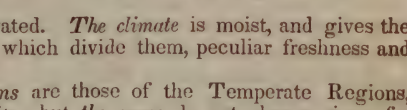
1268. What countries did they discover? Who are their descendants? Where have they colonies?



(140) *Canals and Railways in England.*

western peninsulas of Cornwall and Wales are *mountainous;* and a range of highlands passes from them, along the western coast. The general surface may be seen in the following profile.

How do you ascend and descend, in crossing England from East to West?



(141) *Profile of England.*

1274. *The soil of England* is uncommonly fertile, well watered and well cultivated. *The climate* is moist, and gives the fields, and the hedges which divide them, peculiar freshness and beauty.

1275. *The productions* are those of the Temperate Regions, except the delicate fruits; but *the crops* do not always ripen, for want of sunshine.

1276. England is rich in *mines* of copper, iron, tin, coal, and salt, and *exports* large quantities of these articles.

II. *M. of G. B.* — In which part of England are its mountains? What rivers on the eastern side? What on the western? What river bounds it on the North?

III. 1277. *The higher classes in England*, who are called noblemen and gentlemen, own most of the land, and are well educated, wealthy, and luxurious. *The middle classes* are engaged chiefly in manufactures or commerce, or in professional business, and are also well instructed.

1278. *The laboring classes* are not generally so well taught as in the United States; but they are industrious, and very skilful in agriculture and manufactures.

1279 *In agriculture and manufactures*, England surpasses almost all other countries. *The coast* abounds in bays and harbors, which are seldom frozen: its *internal commerce* is great; and its *foreign commerce*, with all parts of the world, exceeds that of any other country on the globe

III. On what river does London stand? Where does the Thames empty. What seaports are there on the North Sea? What on the English Channel? What on the western coast? Where are the great manufacturing cities of Birmingham and Manchester? Where are Cambridge and Oxford, with their universities? What other towns do you find, and where?

SCOTLAND.

(142) *Shepherds in Scotland.*

I. 1280. *Scotland is generally* a mountainous and rugged country, especially in the highlands of the northern part, and *is celebrated* for the grandeur and wildness of its lake and mountain scenery. It is best *fitted* for feeding sheep and cattle, and even the waving, hilly *lowlands of the South* are chiefly used for pasturage.

I. *M. of G. Britain.* — How is Scotland bounded? What is its capital? On which coast is it? For what is Scotland remarkable? For what is it best fitted? (¶ 1280.)

(143) *Profile of Scotland from North-West to South-East.*

How do you ascend and descend, and what mountains do you pass on this section, in going from the Hebrides to the south-eastern part of Scotland?

II. 1281. *The soil of Scotland* is generally barren. *The climate* is moist, cold, and stormy, but less so than in Norway, in the same latitude. Grass and the coarse grains are the principal *productions.*

III. 1282. *The Scotch* are among the best taught, and the most intelligent, moral, and industrious people of Europe; and Scotland is distinguished for its *literary institutions* and learned men.

1283. *The manufactures* are extensive and excellent; and *commerce and the fisheries* are important.

1284. The Hebrides, Orkney and Shetland Islands, near Scotland, are about 400 in number. They are *generally* rocky and barren; and *their inhabitants* live chiefly by fishing, fowling, and the pasturage of a few sheep and cattle.

XXI. What seaports has Scotland on the eastern coast? What on the western? What places have universities? Where are the Hebrides? The Orkney Islands? The Shetland Islands? In what region is Scotland on the Chart of Climates? Why is it milder than the continent? (¶ 479.)

IRELAND.

(144) *Poverty and Riches in Ireland.*

I. 1285. *The land owners of Ireland* are rich and luxurious; but *the laborers* are poor and wretched beyond most others in Europe. They are often furnished by their landlords with *huts* little better than those of the Indians.

I. *M. of G. B.*—How is Ireland bounded? What is its capital, and where? What is the state of the people? (¶ 1285.)

II. 1286. *Ireland is generally* a waving, well-watered, fertile country. It contains numerous *bogs* and marshes, which supply peat for fuel.

1287. *The climate* is very mild and moist, and produces a beau-

tiful and continual verdure in the fields, which has given it the name of "The Green Isle of the Ocean." But *the crops* do not ripen so well as in England; and famine is not unfrequent.

1288. *The greater part of Ireland is devoted to* pasturage; and the potato fields supply *the principal food* of the poor.

II. 1289. *The laboring people of Ireland* are ignorant and oppressed by their landlords. Many emigrate to the United States, and are among the most hardy and industrious of the inhabitants.

1290. *Agriculture* is badly conducted. Some *manufactures* are important; but *commerce* is chiefly carried on by the English and Scotch.

III. What large city and seaport is there in the South of Ireland? What seaports on the other coasts? What town on a river (*the Shannon R.*) in the interior? What places have universities?

III. FOREIGN BRITISH POSSESSIONS.

1291. *The British Empire embraces* not only the British Isles, but numerous possessions in all parts of the world, which are so *extensive*, that the sun never sets on all parts of its dominions. The following are in Europe; and the rest will be described under each grand division.

1292. HELIGOLAND consists of two islands opposite the mouth of the Elbe, one of which is a lofty rock. It is possessed by Great Britain, and inhabited only by Danish fishermen and a British garrison.

1293. JERSEY, GUERNSEY, ALDERNEY, and SARK, are small islands lying on the coast of France. The inhabitants speak the old Norman French, and are governed by their own laws, under the authority of Great Britain.

1294. GIBRALTAR is a lofty, rocky peninsula of Spain, at the entrance of the Straits of Gibraltar, which has been made an impregnable fortress, and is occupied by the British. It is a free port, and a place of great trade; and the bay forms a fine harbor for ships navigating the Mediterranean Sea. (p. 51.)

1295. MALTA, an island in the Mediterranean, and the same with the ancient Melita, on which St. Paul was shipwrecked, is the chief of a group of rocks rising from the sea, which were covered with soil brought from other countries. *These islands* are now strongly fortified and well cultivated; and are more populous than any other part of Europe.

1296. THE IONIAN ISLANDS, on the coast of Greece, are under the protection of Great Britain, with a British governor.

Political Map of Europe. — What places on the continent of Europe near to Heligoland? What to Jersey? What to Gibraltar? What places opposite in Africa?

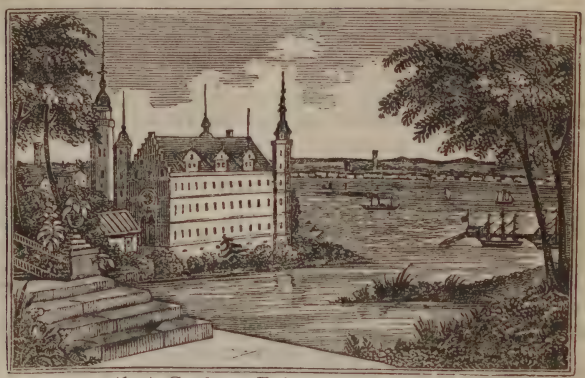
NORTHERN COUNTRIES OF EUROPE.

I. *M. of E.* — What two peninsulas are there in the north-western part of Europe? What countries do they contain? What other country E. of Sweden covers the rest of Northern Europe?

DENMARK.

I. 1297. *Denmark was once distinguished* for its extensive commerce and its navy, but is now reduced. *Its chief revenue* is obtained from the tolls paid by every vessel that

passes through "The Sound," or strait at Elsinore, which is guarded by a castle.



(136) *Castle at Elsinore, on the Sound.*

I. *M. of E.* — How is Denmark bounded? What islands belong to it? What is its capital, on the Island of Zealand? Where is Elsinore, and what is paid there? (¶ 1297.)

II. 1298. *Denmark* is one of the smallest countries of Europe. *It is situated* on a narrow peninsula, and a few neighboring islands, *which form* a part of the German lowland already described. (¶ 1211.)

1299. *The soil*, in some parts of the peninsula, is marshy or sandy; but *a considerable part* of it is quite productive, and *the islands* are very fertile.

1300. *The climate* is moist, like that of Great Britain, and much milder than that of Russia and Sweden in the same latitude. *The pastures* are excellent, and *the harvests* supply more than is wanted for the use of the country.

II. What straits or passages separate Denmark from Sweden and Norway? Has it any mountains? What river has it? (*See Map of Germany.*)

III. 1301. *The Danes* have numerous schools, and are well taught and industrious. They have few *manufactures;* but the seas around them give them great advantages for *commerce* and *the fisheries*, in which they are much engaged.

1302. *Denmark possesses* Iceland and the Faroe Isles in Europe, and the *islands* of St. Thomas, St. Croix, and St. John's, in the West Indies, together with *colonies* in Greenland and Hindoostan, and *forts* on the coast of Northern Guinea.

III. Where is Iceland? Where are the Faroe Isles? Greenland? (*See Map of the World.*)

1303. ICELAND and THE FAROE ISLES are rugged, dreary islands. *Iceland contains* several volcanoes, and large tracts are covered with

lava. *It is remarkable for* the Geysers, or hot spouting springs. (*See* ¶ 378.)

1304. *The climate* is milder than that of Norway, and the *winters* are less severe than those of Germany; but *grain* cannot be raised; a few vegetables are cultivated with difficulty; and *trees* are unknown.

1305. *The people* are simple and intelligent, and *in Iceland* are well taught. *They subsist* chiefly by fishing and pasturage, and gather the down of the eider-duck, which is an important article of commerce, both from Iceland and the Faroe Isles.

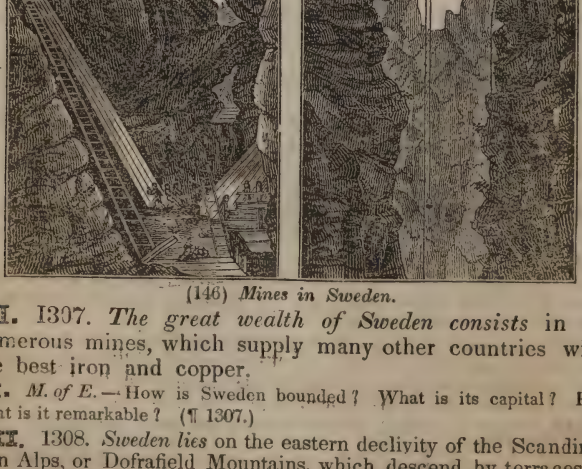
HAMBURG AND LUBECK.

III. 1306. HAMBURG and LUBECK are free cities, with a republican government, which lie within the boundaries of Denmark. They are important commercial ports.

III. On what island is Elsinore? (*The passage here is called "The Sound."*) *Map of Germany.* — Where is the Danish city of Altona, in the South? What free city is near it? Where is Lubeck? Kiel? What places have universities? By what canal and river can you cross the isthmus of Denmark? (*See* ¶ 1246, *and Map.*)

In what region is Denmark as to climate? (*See Chart of Climates.*) Why is its climate milder than that of the interior? (*See* ¶ 479.) What are the government, religion, and state of civilization of Denmark? (*See Moral Chart.*)

SWEDEN.



(146) *Mines in Sweden.*

I. 1307. *The great wealth of Sweden consists* in its numerous mines, which supply many other countries with the best iron and copper.

I. *M. of E.* — How is Sweden bounded? What is its capital? For what is it remarkable? (¶ 1307.)

II. 1308. *Sweden lies* on the eastern declivity of the Scandinavian Alps, or Dofrafield Mountains, which descend by terraces to the Gulf of Bothnia, as in the profile on page 270.

1309. *The surface* is hilly, and *is crossed* by numerous low ranges of naked rocks, *and cut* by deep chasms which contain rivers and lakes.

1310. *The soil* is productive where it is sufficiently deep, as in the southern parts, but generally forms only a thin covering on the rocks.

1311. *The climate in the South* ripens the fruits and grain of the Cold Regions; but *the northern parts* are too cold, rugged, and barren for cultivation.

Scarcely one thirtieth part of Sweden *can be cultivated;* nearly two thirds of its surface is *uninhabited;* and it is really one great *forest,* with a few cleared districts.

II. What mountains border Sweden on the W.? Has it many rivers and lakes? Where do most of the rivers empty? Which are some of the largest? What are the principal lakes? What islands on the coast of Sweden on the S. E.?

III. 1312. *The Swedes* are intelligent, well taught, and industrious, but are not able to *produce* or *manufacture* what they need. Their *fisheries* and *commerce* are important.

1313. *Norway* is under the government of the king of Sweden; and *the Island of St. Bartholomew*, in the West Indies, belongs to this kingdom.

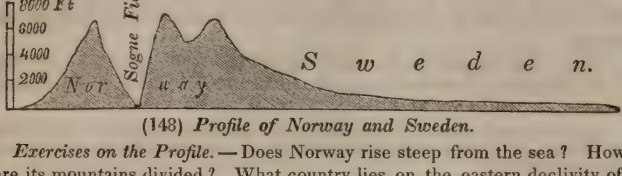
IV. On what lake is Stockholm? What large lake is connected with the Cattegat? (*A canal unites these lakes.*) What seaport has Sweden on the Cattegat? What on the eastern coast, South of Stockholm? What places North of Stockholm, and where? What places have universities? See on the Chart of Climates in what regions Sweden lies. What plants may we expect in the northern parts? What in the middle? What in the South? What is its government, religion, and state of civilization? (*See Moral Chart.*)

NORWAY.

(147) *Fiord in Norway.*

I. 1314. *The coast of Norway* is high and rocky, and is cut by deep bays called fiords, whose shores are the chief residence of the inhabitants

I. *M. of E.*—How is Norway bounded? What is its capital? How is its coast? (¶ 1314.)



(143) *Profile of Norway and Sweden.*

Exercises on the Profile.—Does Norway rise steep from the sea? How are its mountains divided? What country lies on the eastern declivity of the mountains? Is this declivity steep?

II. 1315. *Norway lies* on the steep western declivity of the Scandinavian Alps, as represented in the profile.

1316. *Its surface* is very rugged, consisting chiefly of ridges of rocks, divided by chasms or deep valleys. It has a narrow *lowland* on the coast, on which most of the towns are built.

1317. *The coast is* lined with peninsulas and islands, which form numerous small *bays* and harbors; and *the people are obliged to travel* chiefly in boats, even in attending public worship.

1318. *The soil* is barren. *The climate* is milder than in Sweden, but it is so moist, that even the coarse grains do not easily ripen. The people are generally obliged to make *their bread* in part of the bark of trees; and *most of their food* is obtained from their fisheries and cattle.

III. 1319. Norway contains valuable *mines* of iron, copper, and silver; and these, with the lumber of their forests, and the produce of their fisheries, furnish *their chief exports.*

1320. *The Norwegians* are intelligent, well taught, and industrious, and were once amongst the most powerful and commercial nations of Northern Europe. *They manufacture* in families most of the articles they need, and carry the products of their country abroad in their own *ships.*

III. What seaports has Norway on the Atlantic Ocean? What on the Skager Rack and its branches? Where is Kongsberg, remarkable for its silver mines? Where are the Loffoden Isles, with the great whirlpool called the Maelstrom? What places have universities in Norway? Find, on the Chart of Climates, in what regions Norway lies. Will it have a moist or a dry climate? (¶ 479.) What productions may we expect? What is the government, religion, and state of civilization, of Norway?

LAPLAND.

I. 1321. *Lapland* is the country lying between the Gulf of Bothnia and the White Sea, and the Arctic Ocean, including the northern parts of Norway, Sweden, and Russia. It is so cold and unproductive, that reindeer are almost the only animals that can subsist, and the people

live on their milk and flesh, dress in their skins, and use them to carry burdens and draw their sledges.

I. *M. of E.*—Where is Lapland? For what is it remarkable? (¶ 1321.) Do you find any large streams here? What Swedish town on the Gulf of Bothnia? Do you find any towns in Lapland?

II. 1322. Lapland has a barren *soil* and a severe *climate*, and produces little except the moss and grass on which the reindeer feeds.

III. 1323. *The Laplanders* are ignorant and barbarous, but mild and honest. They have some trade with the Swedish town of Tornea, to obtain supplies of food and manufactured articles.

RUSSIAN EMPIRE.

I. 1324. *The Russian Empire extends* from the Baltic Sea, across Europe and Northern Asia, to the north-western coast of America. It reaches more than half round the globe, and comprises one ninth part of the inhabited world.

1325. *It consists of* Russia, Poland, the provinces of the Caucasus, Siberia, and Russian America, each of which is described under the head of the grand division to which it belongs.

RUSSIA IN EUROPE.

(149) *Russian Village.*

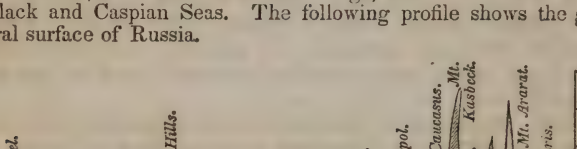
I. 1326. The winters of Russia are severely cold; and then, the snow paths furnish the best roads for *travelling*, by the shortest course, over fields, fences, and marshes

1327. *The greater part* of it is covered with forests; and *the villages* consist chiefly of houses built of logs or solid timber, which are warmer than those of brick or stone.

I. *M. of E.* — How is Russia bounded? What is its capital, and where? What are the best roads in Russia? (¶ 1326.) How are its villages built? (¶ 1327.)

II. 1328. *Russia occupies* the north-eastern lowland of Europe, and is more extensive than all the rest of its countries together, but more thinly inhabited. It extends from the Arctic Ocean to the Black Sea, and the southern declivity of the Caucasus.

1329. *It is generally* a level or waving country, with no elevations except two low ridges of hills — *the North Russian Ridge*, which extends from the borders of the Baltic Sea to the Ural Mountains; and *the South Russian Ridge*, which runs North of the Black and Caspian Seas. The following profile shows the general surface of Russia.



(150) *Profile of Russia, the Caucasus, and Georgia.*

Exercises on the Profile. — Describe the character of the surface, from the Arctic Ocean to the North Russian Ridge. What is it between the two ridges? What S. of the Southern Ridge? Where do we first find mountains in going S. from Archangel?

1330. *These ridges divide Russia* into three portions. *The northern part* is level, but barren, and covered with swamps and mossy plains. *The climate* is also so cold that crops cannot be raised, and few trees can grow. *The southern part* is fertile on the Black Sea, but elsewhere it is a region of steppes and deserts. *The summers* are so warm that the wine grape is cultivated, but *the winters* are often severe.

1331. *The middle region* is a fertile, well-watered country, covered with forests, or rich pastures and cultivated fields. It has the continental *climate*, with hot summers and severe winters, but fewer *changes* than in Western Europe.

II. Into how many seas do the rivers of Russia empty? How many declivities must it have then? (*See* ¶ 388.) In what direction does the land slope in the northern part? In the southern? In the western part? What is a water-shed? (¶ 387.) Where is the water-shed between the northern rivers of Russia and the Volga? Where are the Valdai Hills? What river rises in them? Where does it empty? What rivers of Russia empty into the Black Sea and Sea of Azof? What into the Baltic Sea?

What into the White Sea? What into the Arctic Ocean? What lakes are there near the Baltic Sea?

III. 1332. Russia contains *inhabitants* of various races, languages, and religions. *The steppes and deserts*, on the North-East and South-East, are inhabited by Samoiedes, Tartars, and other wandering Asiatic tribes, who are generally Pagan or Mahometan. *The middle and southern parts* are inhabited by Russians, Poles, and Germans, who are Christians.

1333. *The Russians are divided* into two principal classes — the nobles, who own nearly all the land, and the "boors" or farmers, who are their slaves, and are ignorant, rude, and half barbarous.

1334. *Pasturage* is most generally pursued, and the ground is poorly *cultivated;* but the rich soil renders *the products* abundant and the nobles wealthy. Russia also contains valuable *mines* of iron, copper, silver, gold, and diamonds. Some *manufactures* of the metals, as well as of cordage, sail-cloth, and leather, and some other articles, are extensive and important.

1335. These and other products of the herds and the fields furnish important *exports*, and give rise to extensive foreign as well as inland *commerce*. *It is carried on*, not only by sea, but by caravans overland, to the interior of Asia and China.

III. What seaports are there on the White Sea? What division of Russia lies North of the Gulf of Finland? What seaport has it? Where is Cronstadt, the seaport of Petersburg? What seaports in Finland? What seaports on the Black Sea? What on the Caspian Sea?

Where is Moscow, the ancient capital of Russia? What cities do you find on the River Volga, following the main stream, from the Valdai Hills to its mouth? What on its eastern branches? What on its western branches?

What cities in the valley of the River Don? What on the Dnyeper? (*Dn-yep-er.*) What on the Vistula? On the Niemen? On the Dwina? On the Northern Dwina? What places have universities?

Where are the frozen, uninhabited, Russian islands of Spitzbergen and Nova Zembla? Find, on the Chart of Climates, in what regions Russia lies. What products may we expect in the North? What in the middle regions? What in the South? What is the government of Russia? (*See Moral Chart.*) The prevailing religion? The general state of civilization? Are any portions of the country and people enlightened?

THE CAUCASUS, GEORGIA, AND CIRCASSIA.

I. 1336. *The Provinces of the Caucasus, Georgia, and Circassia, lie* between the Caspian and Black Seas, and are claimed, and in part possessed, by Russia. They are in this way more *connected* with Europe than with Asia; and *some of the people* are among the most beautiful of the European race.

I. *M. of E.* — Where are Circassia and Georgia? What mountains and seas around these countries? What is the chief town of Georgia? What is remarkable in some of the people? (¶ 1336.)

II. 1337. *These countries* are generally rugged and unproductive; but they have some *commerce*. *A few of the various tribes*

profess to be Christians; but they are *generally* barbarous, and some are mere bands of robbers.

II. What rivers are there in Georgia? What seaports on the Caspian Sea?

POLAND.

I. 1338. *Poland was formerly* a powerful country, and at one time conquered Russia; but it has since been conquered, and *is now* divided between Russia, Austria, and Prussia. *The largest part* belongs to Russia.

I. *M. of E.* — Where is Poland? What was it formerly? (¶ 1338.) To whom does the largest part belong? Where is Warsaw, its capital? What rivers do you find in Poland?

II. 1339. *Poland* is a level, well-watered, fertile region. *Its climate* is cold and moist; but *its harvests* are abundant, and *it exports* a large quantity of wheat and other grain.

III. 1340. *The Poles* still retain their own language, customs, and religion; but the only independent part is the free city, or Republic of Cracow, in Austrian Poland. *They are generally divided*, like the Russians, into wealthy nobles, and miserable, oppressed boors. *The people* are generally ignorant; they have little skill in *agriculture* or *manufactures*, and leave the important *commerce* in their productions chiefly to Jews, who are very numerous here, and to foreigners.

MIDDLE COUNTRIES OF EUROPE.

I. 1341. The middle countries of Europe lie between 45° and 55° of North latitude, and have a temperate climate, with nearly the same productions. They include Holland, belonging to the German lowland; Belgium and France, on the Atlantic declivity; and Switzerland and Germany, on the central highlands.

I. *M. of E.* — What countries lie between the Baltic and the Mediterranean Seas? Which lie on the Atlantic and North Sea? Between what sea on the North, and mountains on the South, is Germany? Is Switzerland near the sea, or inland?

HOLLAND.

I. 1342. *Holland was formerly* a marsh, and a large part of it is lower than the sea. It is surrounded by dikes or banks, and is *drained* by canals. These pass through the country in every direction; are used instead of roads; and are traversed by means of boats in summer, and on the ice in winter.

The canals are often higher than the country around; and the water is

pumped into them by means of numerous windmills, which are continually in motion.

I. *M. of Ger.* — How is Holland bounded? What sea does it enclose? What is its capital, lying on the Zuyder Zee? What is remarkable in Holland? (¶ 1342.)

II. 1343. *Holland lies* at the western extremity of the German lowland, on the delta of the Rhine, and its surface is flat and moist. *The soil* is highly cultivated, and forms rich pastures and productive fields.

The German Duchy of Luxemburg, on the eastern border of Belgium, which belongs to Holland, is a fertile, but more elevated and dry country.

1344. Holland has a maritime *climate.* (*See* ¶ 480.) *It produces* wheat, flax, and most plants of the Temperate Regions, except the delicate fruits; but *it is chiefly devoted* to pasturage.

II. What great river empties itself in Holland? Has it one or many mouths? What towns do you find around Amsterdam?

III. 1345. *The Dutch* are well taught, and remarkable for their industry and perseverance. They excel in *agriculture*, and have some important *manufactures.* Their *fisheries and commerce* are extensive and valuable.

1346. *Holland has colonies* in many of the islands of the Indian Archipelago, and *obtains from them* pepper, spices, and other valuable products of the Torrid Zone, with which it supplies other nations.

1347. *It also possesses* a part of Guiana, the Islands of Curaçoa and St. Eustatia, in the West Indies, and several forts on the coast of Northern Guinea.

III. What cities do you find besides Amsterdam? In what region, as to climate, is Holland? (*See Chart of Climates.*) What is its government, religion, and state of civilization? (*See Moral Chart.*)

BELGIUM.

I. 1348. *Belgium* (formerly called Flanders) is a level country, *remarkable* for the battles fought on its plains by the nations around it. *The last* great battle was at Waterloo, near Brussels, in 1815; when the fields were covered with the dead and wounded, as far as the eye could reach.

I. *M. of Ger.* — How is Belgium bounded? What is the capital? For what is it remarkable? (¶ 1348.)

II. *The northern part of Belgium* belongs to the delta of the Rivers Rhine and Scheldt, and is low, flat, and cut up by canals, like Holland.

1349. *The southern part* belongs to the declivity of France, (*see* ¶ 1233,) and is a waving or hilly country, remarkable for its fertility and beauty.

1350. *The climate* is temperate, and is less moist and more pleasant than that of Holland. *The soil* is well cultivated; and *the*

productions of the Temperate Regions are abundant, except the delicate fruits.

III. 1351. *The Belgians* are ignorant and superstitious, but they are industrious, and remarkable for their skill in *agriculture and manufactures*. They have a valuable and increasing *commerce*, both by land and sea.

1352. *Schools* are now generally established, as well as *universities*, and the people are improving in knowledge; but most of them are not allowed to read the Bible.

III. What other towns do you find in Belgium besides the capital? Look on the Moral Chart, and see what is the government of Belgium. What is the prevailing religion? The state of civilization?

FRANCE.

(151) *Peasants dancing.*

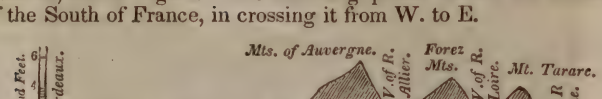
I. 1353. *France abounds* in vineyards, so that wine is the common drink of the people. It is *a favorite amusement* of the laborers to dance, especially after the grapes are gathered.

I. *Pol. M. of E.* — How is France bounded? What is its capital? What can you say of the drink and amusements of the people? (¶ 1353.)

II. 1354. *The eastern part of France* is occupied by the fruitful valleys of the Rhine and the Rhone, and a range of mountains and table lands, which are *crossed* by a number of roads and canals.

1355. *The western part* descends in gentle declivities towards the Atlantic Ocean and the North Sea, and is a waving, well-

watered, fertile region. The following profile shows the surface of the South of France, in crossing it from W. to E.



(152) *Profile of Southern France.*

Exercises on the Profile.— Describe the surface of Southern France, from the Atlantic Ocean to the valley of the Rhone, as it appears in the profile.

1356. *The soil* of France is more fertile, and *its productions* are more abundant and valuable, than those of most other countries of Europe.

1357. *The climate* in the North is cold; in the middle regions, it is mild; and in the South, it is so warm as to allow the cultivation of olives, figs, and oranges.

II. In what part of France are its mountains? Has it many rivers? What rivers are in the northern part, and where does each rise and empty? Those of the southern part? Of the eastern part?

III. 1358. *The French* are naturally intelligent and industrious; and their literary and scientific institutions, their libraries and museums, and their learned men, are celebrated throughout Europe.

1359. *The people* are not generally well taught, and those of the South of France are extremely ignorant.

1360. *Agriculture* is better conducted than in most countries of Europe; and none excel the French in the beauty of their *manufactures*. *Their commerce* is extensive, both by foreign and French ships.

1361. *The Island of Corsica* belongs to France. *It is* mountainous and unproductive. *The people* have little instruction; and *the mountaineers* are almost savages.

1362. France has *foreign colonies* in Algiers, Guiana, the West Indies, the Island of Bourbon, in Pondicherry in India, and in some of the islands of Oceanica.

IV. What large city lies on the Rhine? What cities on the Rhone? What seaports on the Mediterranean Sea? Where is Montpelier? What important seaport lies on the Garonne River? What ports on the Bay of Biscay? What on the English Channel? Where is Calais? What cities in the North? In the interior? What cities on the River Seine and its branches? What seaport at its mouth? What cities on the Loire and its branches?

In what regions do we find France on the Chart of Climates? What productions should we expect? What is its government? (*See Moral Chart.*) Its religion? Its state of civilization?

SWITZERLAND.

I. 1363. *Switzerland is traversed* by the Alps. *It is celebrated* for the grandeur of its mountains, and the beauty of its valleys, lakes, streams, and waterfalls; and for the vast fields of ice and snow, from which their waters descend.

(153) *Mountain Village in Switzerland.*

I. *Pol. M. of Eur. and Ger.* — How is Switzerland bounded? Where is Berne, which is generally considered the capital? For what is it remarkable? (¶ 1363.)

II. 1364. *The southern part of Switzerland lies* among the ranges of the Alps, and consists of lofty mountains and deep valleys, with fields of ice more than 1000 square miles in extent.

1365. *The higher parts of the mountains* are desert with cold. *The declivities* have summer pastures, to which the cattle of the valleys are driven for a few months in the year. *The northern part* lies on the Swiss Bavarian table land, and has a rugged, hilly *surface*, but *the soil* is productive in this region, especially in the valleys.

1366. *The climate varies with the elevation, but is generally* cold and variable. *The harvests* are uncertain; and Switzerland does not *produce* enough for the subsistence of the people.

Some of the valleys, and the southern declivities of the mountains, are so warm that the wine grape and delicate fruits are abundant.

II. What rivers rise in Switzerland? What mountains cover a large part of it? What lakes has it?

III. 1367. *Switzerland is divided* into 22 cantons, differing in language, religion, and constitution, but united in one federal republic, governed by a diet or congress.

1368. *The people* of the several cantons differ materially in their character; but they are generally more intelligent, and better taught, than the surrounding nations.

1369. *They are generally* industrious and skilful in *agriculture*, and in some branches of manufacture; and many emigrate to foreign countries to engage in manufactures or commerce.

1370. Switzerland is entirely an inland country, and *its commerce* is only with the neighboring countries, or, through their seaports, with

foreign countries. The Swiss are obliged to *import* grain and other provisions; but they *export* a considerable amount of manufactures, even to America.

III. What towns do you find besides the capital of Switzerland? In what region on the Chart of Climates is Switzerland? (*It is colder than the lowlands on account of its elevation.*) What is its government, religion, and civilization?

GERMANY,

OR, THE GERMANIC CONFEDERATION.

I. 1371. *The northern declivity of the Alps is inhabited* chiefly by Germans, who speak the same language, and their country is therefore called Germany. *It extends* from the Baltic Sea on the North to the Rhine on the South, and from the borders of Russia, Bohemia, and Hungary, on the East, to the borders of France, Belgium, and Holland, on the West.

Germany is divided into thirty-nine distinct states, which are united in the Germanic Confederation. *Austria and Prussia*, which are the largest states, *embrace* some countries not belonging to Germany.

I. *Q. and Ex.* — 1371. In what part of Europe does Germany lie? How is it bounded, or how far does it extend in each direction?

II. 1372. *Germany occupies* the centre of Europe, and is chiefly an inland country, with only a few unimportant *seaports* on the Baltic and Adriatic Seas. But it has sixty *rivers*, and its large streams open the way from the ocean to the heart of Europe.

1373. *It is traversed nearly in the middle*, or about latitude 50°, by the River Mayne, which flows into the Rhine; and *may be divided* into Germany South of the Mayne, and North of the Mayne.

1374. *Southern Germany* lies on the first and second terraces of the Alps, and is generally rugged, elevated, and cold. *Northern Germany* — North of the Mayne — lies on the third terrace of the Alps, and the German lowland. It is more level, and in many parts more fertile. *The climate* varies with the elevation.

1375. *The valleys of the Rhine and its branches* are among the most fertile regions; and they have *a climate* so mild, that vineyards are abundant. Some parts of *the second terrace* are also very fertile; and its mountains are rich in *mines*.

II. *M. of Eur. and Ger.* — What sea bounds Germany on the North? What rivers empty into it? What sea on the N-W.? What streams flow into the North Sea? What river which rises in Germany flows into the Black Sea? What mountains are there in Northern Germany? In Southern Germany? Which part of Germany consists chiefly of highlands? Which of lowlands? What river runs from East to West, nearly through the middle of Germany? (¶ 1373.)

XII. 1376. *The Germans* are distinguished for their industry and perseverance; and, in most states, are among the best *instructed* people of Europe.

1377. *They are generally skilful* in agriculture, and many districts export grain. *Manufactures* are numerous and increasing; and *commerce* is extensive, but chiefly overland, or through the seaports of the surrounding countries.

1378. *Germany is chiefly distinguished* for its literary institutions, libraries, museums, and the number of its learned men; and the northern states, especially, excel all other countries of Europe in these respects.

The following list contains the names of the independent states belonging to the German Confederation, in their geographical order, presenting the smaller states in connection with those in which they are enclosed. Luxemburg belongs to Holland, and Holstein and Lauenburg to Denmark.

E. indicates an empire; *K.*, a kingdom; *D.*, a duchy; *P.*, a principality; and *F. C.*, a free city. The initial letters following the names of some of the smaller states refer to the map.

SOUTHERN STATES.

E. of Austria.

Austria encloses

P. of Lichtenstein, (*Ln.*)

K. of Bavaria.

K. of Wurtemberg.

Wurtemberg encloses

P. Hohenzollern Hechingen, (*H. H.*)
P. Hohenzollern Sigmaringen, (*H. S.*)

D. of Baden.

CENTRAL STATES.

K. of Saxony.

Saxon Duchies.

D. of Saxe Coburg, (*C.*) } united.
D. of Saxe Gotha, (*G.*) }
D. of Saxe Meiningen, (*S. M.*)
D. of Saxe Weimar, (*S. W.*)
D. of Saxe Altenburg.

The Saxon Duchies enclose

P. Schwartzburg Rudolstadt, (*S. R.*)
P. of Reuss Greitz, (*R. G.*)
P. of Reuss Lobenstein, (*R. L.*)

Hessian Duchies.

D. of Hesse Cassel, (*C.*)
D. of Hesse Darmstadt, (*D.*)
D. of Hesse Homburg, (*H.*)

The Hessian Duchies enclose

F. C. Frankfort on Mayne, (*F.*)

D. of Nassau.

D. of Luxemburg.

NORTHERN STATES.

K. of Prussia.

Prussia encloses

P. of Lippe Detmold, } (*Lp.*)
P. of Schaumberg Lippe, }
P. of Waldeck, (*W.*)
P. of Schwartzburg Sondershausen, (*S. S.*)
P. of Anhalt Dessau, }
P. of Anhalt Bernberg, } (*An.*)
P. of Anhalt Cothen, }

K. of Hanover.

Hanover encloses

D. of Brunswick,

D. of Oldenburg,

F. C. Bremen, (*B.*)

D. of Holstein and Lauenburg, (*L.*)

Holstein encloses

F. C. Lubeck, (*Lu.*)
F. C. Hamburg, (*H.*)

D. of Mecklenburg Schwerin, (*Schw.*)

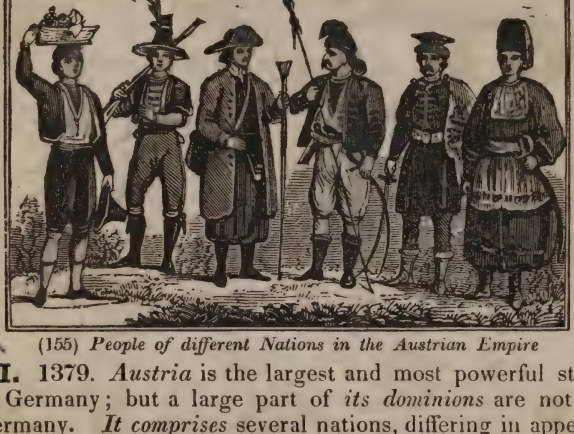
D. of Mecklenburg Strelitz, (*Str.*)

SOUTHERN STATES OF GERMANY.

I. *M. of Ger.* — What four large states of Germany lie South of the River Mayne, or in Southern Germany? Which of these is in the valley of the Rhine? Which lies on the Mayne in part? Which on the Danube and its branches? On what natural divisions of the central highland do Wurtemberg and Bavaria lie? (¶ 1374.)

GERMAN STATES.
HOLSTEIN
MECKLENBURG
R. Elbe
M. Schwerin
M. Strelitz
HOLLAND
R. Ems
OLDENBURG
R. Weser
HANOVER
PRUSSIA
Lippe
Brunswick
Anover
R. Rhine
SAXON DUCHIES
SAXONY
Hesse
Cassel
Darmstadt
NASSAU
R. Maine
BAVARIA
Rhine Provinces of Bavaria
BADEN
WURTEMBERG
R. Danube
R. Rhine
FRANCE
AUSTRIA
SWITZERLAND
L. Constance
EMPIRE

AUSTRIA.



(155) *People of different Nations in the Austrian Empire*

I. 1379. *Austria* is the largest and most powerful state of Germany; but a large part of *its dominions* are not in Germany. *It comprises* several nations, differing in appearance, dress, language, religion, and forms of government; and in almost every state of civilization.

I. *M. of E.*— How is Austria bounded? What is the capital, and where? What divisions or countries do you find in Austria? For what is it remarkable? (¶ 1379.)

II. 1380. *A large part of Austria lies* on the terraces, and in the valleys of the Danube; but Bohemia, Transylvania, and Lombardy, are *distinct basins;* and Tyrolese Switzerland and other provinces lie *among the Alps. Austria thus includes* highlands, terraces, and lowlands, of every degree of elevation.

1381. Hence this empire has every variety of *surface and soil*, from the rugged mountains and table lands, and the barren steppes, to fertile valleys and rich lowlands. About one half of the empire consists of *waste lands and forests.*

1382. *The climate* varies, also, from the heat of Italy to the cold of the Alps; and Austria yields *the productions* of the Cold, Temperate, and Warm Regions, in different parts.

1383. It abounds in rich *mines* of every kind; but they are not generally worked. *The most remarkable* are the vast salt mines of Wielitzka, near Cracow, which were formerly in Poland.

III. 1384. *Austria consists of* the German duchy of Austria, the separate states of Hungary, Bohemia, Transylvania, Polish Gallicia, and Italian Lombardy. It also comprises Croatia, and other prov

inces bordering on Turkey, whose inhabitants are generally soldiers — always armed and scarcely civilized.

1385. *The people of Austria*, therefore, have every variety of character; and some are even barbarous, or savage. *Those who are civilized* are generally instructed in schools, industrious, and remarkably free from crimes.

1386. *Agriculture* is in a low state; *manufactures* are inferior in quality, but sufficient for the use of the empire.

1387. Austria has a very small extent of *sea-coast*, and a limited *commerce*, and has no *foreign colonies*. But its large *army* renders it one of the most powerful states of Europe.

III. *M. of E.* — What seaports has Austria, and where? What town on the Danube above Vienna? What towns below Vienna? What cities North of the Danube in Bohemia? What river of the Baltic rises in Austria? What city is on it? What cities in the eastern part of the empire? What in the southern part?

Chart of Climates. — In what regions do you find Austria? What productions may you expect? Will the climate and productions vary in different parts for any particular reason? (*See* ¶ 1381, 1382.)

Moral Chart. — What is the government of Austria? The prevailing religion? The general state of civilization?

BAVARIA, WURTEMBERG, AND BADEN.

I. 1388. *Bavaria, Wurtemberg, and Baden lie between* the Rhine on the South and West, the Mayne on the North, and the mountains of Austria on the East.

I. *M. of Ger.* — How is Baden bounded? Wurtemberg? Bavaria? What is the capital of each?

II. 1389. *Baden lies* in the valley of the Rhine, and has a fertile soil and a mild climate. *The northern parts of Wurtemberg and Bavaria*, which lie in the valleys of the Rivers Mayne and Neckar, have the same character; and all these valleys produce the wine grape.

1390. *The southern parts of Wurtemberg and Bavaria* lie on the upper terraces of the Alps, and are rugged and not productive.

1391. *The climate and productions* vary more with the difference of elevation than with the latitude; and the higher regions are as cold as Northern Germany.

1392. The mountains of these countries contain valuable *mines;* and the lumber of their *forests* is also an article of trade.

II. In what part of Southern Germany is Baden? Bavaria? Wurtemberg? What rivers do you find in each? Which countries border on Switzerland and the Rhine? Which lie on the River Mayne?

III. 1393. *The people* of all these countries are taught in schools, and are not wanting in industry. Those of *Wurtemberg* are superior to their neighbors in intelligence and industry.

1394. These countries are chiefly agricultural, but not in the best state of *cultivation*. Some branches of *manufacture* are extensive and important. *Commerce* in these articles is considerable; and most civ-

ilized countries import the toys, baskets, and wood-work of these regions.

III. What cities are there in each of these countries besides the capital? What places have universities?

Moral Chart. — What is the government, religion, and state of civilization of Bavaria? Of Wurtemberg? Of Baden?

CENTRAL STATES OF GERMANY.

I. 1395. Between the River Mayne on the South, and Prussia and Hanover on the North, are a number of small states, which may be called *the Central States of Germany.*

I. *M. of Ger.* — What states of Germany lie North of the River Mayne and the Erz-ge-bir-ge, or Ore Mountains, extending to Prussia? Is the kingdom of Saxony in the eastern or western part of this region? In what part of it are the Hesses, or Hessian States, and Nassau? Where are the Saxes, or Saxon States? What two countries surround the Central States on the North and West? What four countries are on the southern borders of the Central States?

SAXONY AND THE SAXON STATES,

Including Saxe Weimar, Saxe Gotha, Meiningen, Altenburg, and Coburg.

II. 1396. *The Saxon States lie* on the third terrace of the Alps, which forms the declivity from the highlands to the lowlands.

1397. *The surface, soil, and elevation,* of these states, are very various.

1398. *The kingdom of Saxony* has a productive *soil* in many parts, but is peculiarly rich in mines. *The smaller Saxon States* are very fertile, both in pastures and cultivated fields.

II. *M. of Ger.* — How is the kingdom of Saxony bounded? What is its capital? What cities do you find in the small Saxon States? What mountains are there in Saxony? What river passes through it?

III. 1399. *The people of these states* are well taught and industrious; and their literary institutions and learned men hold a high rank in Europe.

1400. *Agriculture* is well conducted. *Manufactures* are considerable, and skilfully made; and *the inland commerce* is important.

1401. *The mines* of the kingdom of Saxony are very ancient and rich; and the miners are noted for their skill.

III. What cities do you find besides the capitals?

HESSIAN STATES.

Hesse Darmstadt, Hesse Cassel, and Hesse Homburg.

II. 1402. *The Hessian States lie* on a dry and rugged table land, and are much less productive than the Saxon States; but the valleys of the streams are fertile, especially that of the Mayne.

III. 1403. *The people* are not so well taught, nor so industrious, as the Germans around them. *Agriculture* is not generally well conducted; *manufactures* are few; and the laboring classes are very poor.

1404. FRANKFORT is a free city, lying on the River Mayne, within the boundaries of Hesse Darmstadt. *It is celebrated* as a rich commercial place, and the capital of the German Confederation.

III. *M. of Ger.* — How are the Hessian States bounded? What cities do you find? Where is Frankfort?

NASSAU.

II. 1405. *The Duchy of Nassau* is a mountainous and beautiful region, lying North of the River Mayne between the Hessian States and the Rhine. *It is remarkable* for its numerous mineral springs.

II. Where is the Duchy of Nassau? How is it bounded?

NORTHERN STATES OF GERMANY.

I. *M. of Ger.* — What states of Germany lie North of the Saxon and Hessian States? Which is the largest of these? Which is next in size? What two duchies are almost surrounded by Hanover? What two duchies lie North of the River Elbe?

PRUSSIA.

(156) *University and Arsenal in Berlin.*

I. 1406. *Prussia* is the second state in Germany in extent and power. *It is distinguished for* its literary institutions; and also for its arsenals and army, which are superior to most others in Europe.

1407. *The greater part of Prussia lies* between the Baltic Sea and the mountains of Bohemia; but this king-

dom also possesses extensive provinces on the Rhine, separated from the rest by the kingdom of Hanover.

I. *Pol. M. E.* — How is the eastern part of Prussia bounded? How is the western portion of Prussia bounded, which lies on the Rhine? What states lie between these two portions of Prussia? What is the capital of Prussia, and in what part of it? For what is Prussia remarkable? (¶ 1406.) Where does the greater part of it lie? (¶ 1407.) What does it possess besides?

II. 1408. *Prussia lies chiefly* on the northern lowland of Germany, and *its surface* is very level. *It abounds in* sandy plains and marshes, and *the soil* is not generally fertile. *The climate* is cold, and not favorable to cultivation; but *the crops* of the Temperate Regions are cultivated.

II. Do you find mountains in Prussia? What rivers pass through the eastern part? What are there in the western part? What sea does it touch upon?

III. 1409. *The people of Prussia* are well taught and industrious, except in the Polish provinces; and *they cultivate the land* so well as to supply their own wants.

1410. Prussia has some *manufactures* of importance; and its numerous rivers and canals give it extensive *inland commerce*. But its only *seaports* are on the Baltic Sea, with shallow harbors; and therefore it has little foreign commerce.

III. What seaports has Prussia? On what sea do they lie? What city on the River Elbe? What cities in the eastern part of the kingdom? What city on the Rhine?

In what region, as to climate, is Prussia? (*See Chart of Climates.*) What is its government, prevailing religion, and state of civilization? (*See Moral Chart.*)

HANOVER,

AND THE DUCHIES OF OLDENBURG, BRUNSWICK, HOLSTEIN, AND MECKLENBURG.

I. 1411. *Hanover* was formerly possessed by the king of Great Britain, but is now an independent kingdom, governed by one of the British royal family.

I. *M. of Ger.* — How is Hanover bounded? What duchy separates the northern and southern parts of Hanover? How is Brunswick bounded? How is the Duchy of Oldenburg bounded? What is the capital of Hanover? Of Brunswick? Of Oldenburg? What rivers run through Hanover? Where is the free city of Bremen? Where is Embden?

II. 1412. *Hanover, Oldenburg, Brunswick, Holstein, and Mecklenburg lie* in the eastern part of the German lowland. *They are* level, and generally sandy, barren countries. In some parts they are covered with *marshes;* and in others, with *heaths*, which afford little food, except for the bees that feed on their flowers, and furnish large quantities of honey.

1413. *The soil* of the river valleys is fertile; but *agriculture* is in a low state, and *the harvests* are not sufficient for the wants of the people.

III. 1414. *The people* are not well taught or skilful in the arts; and *manufactures* are few and unimportant. Hanover is distinguished for its *university* at Gottingen.

III. What cities in Hanover besides the capital?

1415. Bremen is a free city of considerable trade and wealth, lying within the bounds of Hanover. *The commerce* of Hanover and the neighboring duchies is carried on chiefly through Bremen and Hamburg.

1416. The Duchies of Holstein and Lunenburg, North of the Elbe, belong to Denmark.

SOUTHERN PENINSULAS OF EUROPE.

I. *Pol. M. E.*—What three peninsulas are there in the South of Europe? What states are there in the Spanish peninsula? What in the Italian? In the Grecian?

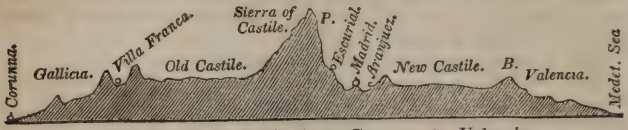
SPAIN.

(157) *Mountain Scenery in Spain.*

I. 1417. *Spain* is a country of mountains and table lands, a large part of which is from 1000 to 2000 feet above the level of the sea. It abounds in wild and sublime *scenery*.

I. *Pol. M. E.*—How is Spain bounded? What mountains bound it on the North? What is its capital? For what is it remarkable? (¶ 1417.)

II. 1418. *The central portion of Spain* is occupied by the table land of Castile, on which Madrid lies, extending from the River Ebro to the Sierra Nevada. The following profile shows the general surface of this peninsula from North-West to South-East.



(158) *Profile of Spain from Corunna to Valencia.*

1419. *The surface of the table land* is irregular, without *forests*, and *chiefly used* as pasture for the immense flocks of merino sheep which are allowed to wander over it.

1420. *The soil* is generally productive; but only a small portion is *cultivated*, and that very poorly.

1421. *The lowlands* of the eastern coast, and of the Rivers Ebro and Guadalquivir, are very fertile, and rich in all productions of the Warm Regions.

1422. *The climate* is dry, and intensely hot *in summer;* but *the winters* on the table land are very cold.

II. What chains of mountains cross the central table land of Spain? What river valleys are separated by the Castilian Mts.? What by the other ranges? Which is the most southern range of mountains in Spain? What rivers empty into the Atlantic Ocean? What into the Mediterranean Sea?

III. 1423. The mountains of Spain abound in valuable *mines;* and *this country was once* among the richest in Europe in productions and manufactures.

1424. *The people* are now generally destitute of schools, and of the Bible. *They are* ignorant and indolent; and *agriculture* and *manufactures* are in a very low state.

1425. A few seaports have considerable *commerce;* but it is chiefly carried on by foreigners.

1426. *Spain formerly possessed* Mexico, and the greater part of South America; but these are now independent states, and the only colonies belonging to Spain are the Islands of Cuba and Porto Rico in the West Indies, the Canaries on the coast of Africa, and the Philippine Islands in the East Indies.

1427. ANDORRA is a little republic of 15,000 inhabitants, situated in a valley on the Spanish declivity of the Pyrenees.

III. What seaports are there on the southern coasts of Spain? What cities on the southern rivers? What seaports on the eastern coast? What on the northern coast? What cities on the River Ebro? On the Douro? On the Tagus?

In what region do you find Spain and Portugal on the Chart of Climates? What is the government of Spain? (*See Moral Chart.*) The religion? The state of civilization?

PORTUGAL.

I. 1428. The Portuguese have made little improvement in arts, manufactures, or even in agriculture; and they even tread out their grain with oxen, as was done in ancient times.

I. *Pol. M. E.* — How is Portugal bounded? What is its capital? For what is it remarkable? (¶ 1428.)

II. 1429. *Portugal* is one of the smallest and least important kingdoms of Europe.

1430. *It lies* on the western terrace of the table land of Spain, gradually descending to the sea. *The surface* is irregular; but a large part of it has a fertile *soil.*

1431. *The climate* is dry, and very hot in summer. *The winters* are mild in the lowlands, but cold on the highlands.

II. What rivers pass through Portugal?

III. 1432. *Portugal yields* all the productions of the Warm Regions, but *the people* are generally more ignorant and indolent than those of Spain; *agriculture* and *manufactures* are neglected; and *commerce*, except the cruel slave trade, is left chiefly to foreigners.

1433. *Portugal has colonies* in the Azores, Madeiras, and Cape Verd Islands, on the eastern and western coast of Africa, at Goa in Hindoostan, and at Macao in China.

III. What seaports has Portugal besides the capital? In what region do you find Portugal on the Chart of Climates? What is the government, religion, and state of civilization, marked on the Moral Chart?

ITALY.

(159) *Mt. Vesuvius.*

I. 1434. *Italy is celebrated* for its ancient volcanoes, — Mt. Etna in Sicily, and Mt. Vesuvius, one of whose erup-

tions buried the Roman cities of Herculaneum and Pompeii, near Naples.

In these buried cities, as well as in Rome, and in other parts of Italy, we find *the ruins* of the temples, palaces, and houses of the ancient Romans, who inhabited this country. *In Pompeii,* tools, furniture, and even bread, grain, and eggs, were found in the houses, which were buried with them, A. D. 79.

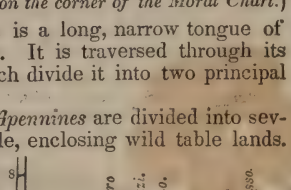
1435. *Italy is divided* into the Kingdom of Naples, in the South; the Roman States, and the Duchies of Tuscany, Parma, and Modena, in the middle; and the Kingdom of Sardinia, and the Austrian Province of Lombardy, in the North.

I. *Pol. M. of E. and Pol. Chart of the World.* — How is Italy bounded? For what is it remarkable? (¶ 1434.) How is it divided? (¶ 1435.) What kingdom is there in the South? What is the capital of Naples? What large island belongs to this kingdom? What kingdom in the North-West? What province in the North belonging to Austria? What is the capital of Sardinia? Where is the Island of Sardinia, belonging to this kingdom? What states lie in the middle of Italy? What is the capital of Tuscany? What of the Roman States? (*These states are distinctly marked on the Chart of Central Europe, on the corner of the Moral Chart.*)

II. 1436. *The Italian peninsula* is a long, narrow tongue of land, extending South from the Alps. It is traversed through its whole length by the Apennines, which divide it into two principal declivities.

1437. In the middle of Italy, *the Apennines* are divided into several ranges, as in the following profile, enclosing wild table lands.

1438. On this account, *the surface of Italy* is irregular, and in many parts rough. *The soil* of the valleys, and many of the lowlands, is fertile; and the basin of the River Po is one of the richest countries of Europe.



(160) *Profile of the Middle Apennines.*

Describe the ascents and descents of the Apennines, and the places on the way, in crossing from W. to E. on this profile.

1439. *The climate* is generally very mild, and Italy yields all the productions of the Warm Regions. *In the neighborhood of the Alps,* the winters are cold.

II. What is the course of the Apennines from the borders of France to Parma? What is it then? How many declivities has Italy? What river and basin on the North? What other rivers do you find? Where is Mt. Vesuvius? Mt. Etna? Where is Sicily? What small islands near it? What volcano among them? (¶ 373.) What other islands W. of Italy?

III. 1440. *The people of Naples and the Roman States* are extremely ignorant, indolent, and unskilful in *agriculture and manufactures.*

1441. *The people of Northern Italy* are better instructed, and are industrious, skilful in *agriculture and manufactures*, and engaged in *commerce*.

1442. The Italians are not generally allowed to read *the Bible;* and they are among the most immoral nations of Europe.

1443. *The Roman States* are governed by the Pope, who is the head of the Roman Catholic Church; and the city of Rome contains St. Peter's Church, the largest and most beautiful in the world.

1444. *The islands* of Sicily, Sardinia, Elba, and the Lipari Islands, *belong to Italy;* but the Italians have no foreign *colonies*.

1445. *Sardinia and Sicily* are naturally very fertile islands, but the ignorance and rudeness of the people are such, that they do not raise enough to supply their own wants.

1446. The little Republic of San Marino is situated on a mountain in the Roman States, and contains 7000 inhabitants, who have maintained their independence for 1000 years.

XII. What seaports has Italy on the Gulf of Venice? What on the Gulf of Tarento? What on the south-western coast? What cities in the interior? What are the principal cities of Lombardy? What cities are there in Sicily? In Sardinia? In what region does Italy lie? (*See Chart of Climates.*) What productions may you expect to find there? What is the government, religion, and state of civilization, of each country of Italy? (*See Central Europe on the Moral Chart.*)

THE GRECIAN PENINSULA.

I. 1447. *The Grecian peninsula is crossed* in various directions by chains of mountains, which give it a rugged surface. They also divide it into numerous table lands and basins, in which the ancient Grecian States were situated.

1448. *The southern extremity of the Grecian peninsula* is occupied by the modern kingdom of Greece; *the centre and eastern parts* by Turkey; and a part of *the western coast* by Austrian Dalmatia and Monte Negro.

I. *Phys. and Pol. M. E.* — How is the Grecian peninsula bounded? What country is there at the South? What in the centre? What on the western coast?

II. What mountains cross it from East to West on the North? What mountains run from North to South? What divisions do they form? What small peninsula forms the southern extremity of the large peninsula? What large island near the coast? What gulf North of it? What two gulfs nearly separate the Morea from the main land? What large island on the eastern coast of Greece? What small islands on the western coast? What small islands in the Ægean Sea? What large island at its entrance? In what region on the Chart of Climates is the Grecian peninsula? What productions may we expect?

TURKEY.

I. 1449. *Turkey is governed* by an absolute monarch, called the Sultan. When he passes through the streets,

all his subjects fall upon their faces before him, as a mark of reverence.

(161) *Reverence paid to the Sultan.*

I. *Pol. M. E.* — What parts of the Grecian peninsula are occupied by Turkey in Europe? How is Turkey bounded? (*Turkey extends on the South to the Gulfs of Vola and Arta, which divide it from Greece.*) What is the capital, and where? What is the Sultan, and how is he treated? (¶ 1449.)

II. 1450. Turkey has every variety of *surface*, from the rich plains of Thessaly and the fertile valleys of Rumelia and the Danube, to the rugged, mountainous regions of the North-West.

On the North-East, on the Danube, are the fertile *lowlands of Wallachia and Moldavia;* and South of these, the basin of *Rumelia or Thrace*, the warmest, richest, and most beautiful part of the peninsula. On *the North-West* are the mountainous provinces of Servia and Bosnia, bordered on the South by the rugged highlands *of Macedonia and Albania.*

The plains of Thessaly form the passage from Macedonia to Greece, and are celebrated for their rich pastures and numerous fields of battle.

1451. *The soil of Turkey* is very various, but is generally fertile. *The climate* is generally warm and delightful; and *Turkey yields* all the productions of the Warm Regions.

II. What lowlands lie on the Danube in Turkey? What mountains cross Turkey from North to South? What basin lies between the Black Sea and the Rhodope Mts., or Despoto Dag? What river occupies this basin? What highland West of these mountains? What plain South of Macedonia? What province East of Mt. Pindus?

III. 1452. *The people of Turkey are chiefly* Mahometans, who are generally ignorant, indolent, and unskilful in arts and *manufactures*, and this is one of the poorest countries of Europe.

1453. The people of some provinces, and the Greeks and Armenians, who are scattered through the empire, are *Christians;* but they are generally little acquainted with the Bible.

1454. Turkey abounds in fine *harbors*, and has important *commerce*, but it is carried on chiefly by foreigners.

1455. *The Turkish Empire includes* Turkey in Asia, and the African States, Tunis, Tripoli, and Egypt.

1456. MONTE NEGRO is a mountainous region on the western coast, between Turkey and Dalmatia, which has always been an independent republic. It contains 60,000 inhabitants, who are brave but half-barbarous.

III. What cities of Turkey lie on the Danube and its branches, beginning at the West? Where is Sophia? What city lies North-West of Constantinople? Where is Salonica? What cities in the southern part of Turkey? Where is Scutari?

GREECE.

(162) *Athens.*

I. 1457. A part of ancient Greece now forms the independent *Kingdom of Greece, consisting* of the peninsula of the Morea, the province of Livadia, (between Thessaly and the Gulf of Corinth,) the Island of Negropont, and a number of small islands in the Ægean Sea.

1458. *This kingdom abounds with* the ruins of the temples and cities of ancient Greece; and the ruins of the ancient Athens now remain on the Acropolis, or the hill on which a part of the modern city is built.

I. *Pol. M. E.* — How is Greece bounded? Where is Athens, the capital? For what is Greece remarkable? (¶ 1458.)

II. 1459. *Greece is divided,* by numerous arms of the sea and ranges of mountains, into the small portions occupied by its ancient states.

1460. *The surface* is rugged, and the islands are mountainous. Some portions have a fertile *soil;* but the greater part of it is uncultivated.

1461. *The climate* is mild and delightful; and Greece yields all *the productions* of the Warm Regions.

III. 1462. *The Greeks* are Christians, but are little acquainted with the Bible. They are intelligent, but ignorant and unskilful in *agriculture* and *manufactures*. They have now established *schools* and *colleges*, and are improving.

1463. Greece abounds in fine *harbors;* and the Greeks are superior to any people of the Mediterranean in *navigation and foreign commerce*.

IONIAN ISLES.

I. 1464. *The Ionian Isles*, on the western coast of Greece, form an independent state, under a British Governor, who resides at Corfu.

I. *M. of E.* — Where are the Ionian Islands? Which are the four largest? What do they form? (¶ 1464.)

II. 1465. *The surface* of these islands is very mountainous. They resemble Greece in their *soil* and *climate;* and grapes, olives, and currants, are their principal *productions*.

III. CITIES OF EUROPE.

1466. *The cities of Europe* far surpass those of America, in number, population, and magnificence. They are superior to any in the world in their universities, hospitals, museums, and other *public institutions;* in the splendor and size of their churches and public buildings; and in the extent of their *manufactures and commerce*.

1467. In the cities *on the continent* of Europe, the streets are usually narrow, crooked, and filthy. They are seldom furnished with sidewalks, and foot passengers are exposed to constant danger in the crowd of carriages.

1468. *The houses* are generally of stone or brick; but in many of the towns of Denmark, Norway, Sweden, and Russia, they are built of timber. They are usually high, often from five to ten stories, in the large cities. They are not *uniform* in their appearance, and magnificent palaces are frequently surrounded with wretched huts.

1469. The cities of Europe are much more *crowded* with houses and inhabitants than those of the United States. In the more populous countries, *villages* like those of America are rarely seen; but every collection of houses appears like a portion of a large city. A great number of the cities and towns are *surrounded* with walls, and *entered* only by gates.

1470. Most cities in the middle countries of Europe have their *streets lighted at night*, and many of them very brilliantly, with gas-lights; so that it is easy and safe to traverse them at all hours.

1471. *In the cities of the* South of Europe, as in other Roman Catholic countries, pictures or images of saints are placed at the corners of the streets. Passengers frequently stop to offer their devotions before them, and lamps burn before them at night, which, in some places, are the only lights in the streets. These cities are also remarkable for the great number of their churches and chapels, and for the costly paintings, statues, and ornaments which these contain.

1472. *The cities of Southern Europe are usually furnished with water* by aqueducts; and public fountains are erected in the streets and public squares, which add to their beauty, and produce a refreshing coolness in the summer.

1473. Most of the large cities are *seaports*, or connected with the sea. The capital is usually distinguished as the residence of the sovereign.

1474. London, Paris, Petersburg, Moscow, Vienna, Berlin, Amsterdam, Dublin, Rome, Florence, and Dresden, are situated *on rivers*, which divide them into two portions, connected by bridges. Rome, Madrid, Lisbon, and Edinburgh, are each built *on several hills*, which gives them a picturesque appearance. Naples, and most of the other *cities lying on the Mediterranean*, are situated on declivities, and the streets rise from the shore, like the seats of an amphitheatre.

1475. *London* is the first city in the civilized world, in population, commerce, and wealth. It also includes Westminster, the residence of the royal family and court, and Southwark, on the South side of the Thames. The streets are generally well paved, and furnished with good sidewalks. It is distinguished for the number of its literary and charitable institutions.

1476. *Paris* is the second city of Europe in population. It holds the first rank in the beauty of its public gardens, fountains, monuments, and palaces, and in the extent and value of its libraries and literary institutions. It is especially distinguished for the gayety and dissipation of the people, and the variety of its public amusements.

1477. *Constantinople* presents a magnificent appearance from the sea, in the assemblage of mosques, towers, and palaces, mingled with beautiful trees. But the streets are narrow, and the whole aspect within the city is gloomy and disagreeable.

1478. *St. Petersburg* is one of the most magnificent cities in Europe, and the seat of extensive commerce. It is built on a spot which, 100 years ago, was almost a marsh.

1479. *Moscow*, the ancient capital of Russia, was burned in the war of 1812, but is now in a great measure rebuilt. It presents a singular mixture of Asiatic huts, and temples, and mosques, with European palaces and churches.

1480. *Vienna*, the former capital of Germany, is now the chief city of the Austrian empire. It is the resort of merchants from the various nations of Europe and Asia, and is distinguished for the beauty of its environs, and the luxury and dissipation of the nobility.

1481. *Berlin*, the residence of the king of Prussia, is a fine, well-built city, situated on both sides of the River Spree, a small branch of the Elbe. It is distinguished for its splendid public buildings, its university, library, museum, and schools, and its manufactures of porcelain and iron.

1482. *Naples* is situated in the midst of a fine amphitheatre of hills. On one side is Mount Vesuvius; and a bay spreads before it, ornamented with fertile islands, which is scarcely equalled in beauty by any in the world.

1483. *Madrid* is situated half a mile above the level of the sea, and in the climate of highlands. It is only important as the residence of the king and royal family.

1484. *Lisbon*, at a distance, presents a magnificent appearance. It has a fine body of water before it, and beautiful cultivated hills in the rear. But the streets are irregular and filthy, and the houses are neither elegant nor convenient.

1485. *Amsterdam* is built on oaken piles, in a marshy spot, and, like most of the cities of Holland, is intersected by a great number of canals passing through its principal streets.

1486. *Dublin* is the second city of the British Isles. It presents a grand appearance from the sea; and few cities have a greater proportion of fine and useful buildings.

1487. *Edinburgh* is not a place of commerce or of manufactures; but it is distinguished for its literary institutions and its learned men.

1488. *Rome* was once the capital of the known world; but it is now decaying in population and wealth. A large part of it is laid out in fields and gardens, or covered with the ruins of the ancient city. Its churches are very splendid; and St. Peter's is the grandest in the world.

1489. *Venice* is a beautiful city, remarkable for its situation on islands. The people pass from one part to another in boats, on the canals, and horses and carriages are rarely seen.

1490. *Hamburg* is the greatest commercial city of Germany. Like the cities of Holland, it is intersected by canals. Some of its streets and squares are well built and beautiful.

1491. *Copenhagen*, situated on the Island of Zealand, is a commercial city of considerable wealth and beauty.

1492. *Stockholm* has a singular and romantic appearance, from its situation on a number of rocky islands.

1493. *Florence*, the capital of Tuscany, is a beautiful city, situated on both sides of the River Arno. *Turin* is a handsome fortified town, the residence of the king of Sardinia. *Genoa* is a rich commercial city, and the great seaport of Sardinia; distinguished also as the birthplace of Columbus. *Dresden* is one of the most elegant cities of Europe, distinguished for its manufactures of fine porcelain or china ware.

1494. *Geneva*, the chief city of Switzerland, has a beautiful situation on the lake of the same name. *Warsaw*, the capital of Poland, is composed chiefly of mean, wooden hovels, with only a few fine buildings. *Bergen* has a fine harbor. *Christiana* is the principal place in Norway, and is admired for the beauty of its situation.

1495. *Athens* was once the most celebrated city in the world for science and learning. The Acropolis was built on a rock 240 feet high, where the ruins of several beautiful temples still exist. The modern town lies on the declivity and plain below, which abounds with olive-trees. Its harbor is at the Piræus, on the Gulf of Egina.

Exercises on Cities.—Examine the Political Map of Europe, and describe the capitals of the first rank. All of the second rank. Of the third. Of the fourth. Put down the population of each from the table of cities in the Atlas.

III. TRAVELS ON THE MAP OF EUROPE.

1496. You must now learn to travel alone. Begin at the British Isles, and travel round the coasts of Europe, and go up the rivers of each country you pass, mentioning what you remember that is remarkable.

ASIA.

I. 1497. *Asia forms* the body of the Eastern Continent, as already described, (p. 64, ¶ 167, 168.) *It is remarkable for* a belt of table lands, the most extensive, and in some parts the loftiest in the world, which stretches across the continent from the Mediterranean Sea to China.

I. *Qu. and Ex.* — 1497. What does Asia form? For what is it remarkable? Review the description of Asia, (pp. 89, 90,) and give an account of its size. (¶ 258.) Its form. (¶ 259.) Peninsulas and sea-coast. (¶ 260, 261.) — *Phys. M. of Asia.* — How is Asia bounded? In what zones does it lie?

HIGHLANDS.

I. 1498. *The Asiatic belt of table lands may be divided* into the eastern or central table land, East of the Belur Tag Mountains, and the western table lands, extending westward from the eastern plateau to the Ægean Sea.

1499. *The central plateau covers* more than one third of Asia, which is thus elevated from 4000 to 15,000 feet above the level of the sea. *It consists chiefly of* steppes and deserts, with few streams, and is crossed by lofty ranges of mountains.

The western table lands are only from 2000 to 6000 feet high. *They are*, to a great extent, barren or desert; but some portions are very fertile.

I. *Qu. and Ex.* — (¶ 1498.) How may the table lands of Asia be divided? (¶ 1499.) Describe the central plateau. The western table lands. — *Phys. M. of A.* — In what directions do rivers flow from the central table land? How then do its declivities descend? (p. 55, ¶ 118, 119.)

II. 1500. *On the North-East*, the central plateau forms the mountain land of Mandshuria, and extends in bold precipices to the Pacific Ocean; *but on other sides*, it descends by gradual declivities to the plains of China, India, and the Sea of Aral, and sends forth numerous large rivers from the snows of its mountains.

(163) *Profile of Asia from the Arctic to the Indian Ocean.*

II. H. 1500. How does the central plateau terminate on the N.-E.? How on other sides?

What are the first mountains you find in going S. from the Arctic Ocean through Siberia? What table land S. of the Altaian Mountains? What chain borders the table land on the South? What do you find S. of the Himalaya Mountains?

1501. *The Himalaya Mountains*, which border it on the South, are the loftiest known on the globe. They have *peaks* nearly six miles in height, and *terraces and table lands* higher than those of the Andes.

1502. The Altaian Mountains, which border the table land on the North, are of the second rank. *This name is often given* to the whole chain, which extends, under various names, from the steppes of the Caspian Sea to Beering's Straits.

1503. In China, we find *the Himalaya Mountains continued* in the Sine Shan, a lofty range covered with snows and glaciers, which terminates *in Nanling*, or South mountains of this empire. *The Peling*, or North mountains, are also a branch of the central plateau.

1504. *The western table lands of Asia extend* from the River Indus to the Ægean Sea, *and may be divided* into Iran on the East and Asia Minor on the West.

1505. The table land of *Iran* lies between the Indus and Euphrates Rivers, and resembles the central table land in its steppes, deserts, and dryness, but has not one large river.

1506. *The mountains on the South and West of Iran are* almost impassable. *On the North it is bordered by* the Hindoo Koosh, or Paropamisan, and the Elburus Mountains, which are easily crossed.

1507. The high mountain lands of *Aderbijan*, *Koordistan*, and *Armenia*, form the passage from the table land of Iran to that of Asia Minor, and give rise to the Euphrates and Tigris.

1508. *The table land of Asia Minor* covers the peninsula of Asiatic Turkey. It is a rugged, barren region, bordered on the South by the Taurus, and on the North by a loftier range.

1509. South of Koordistan is *the Syrian-Arabian table land*, extending to the borders of the Indian Ocean, and embracing the greater part of Syria and Arabia.

1510. *The western part* of the Syrian table land contains the mountains of Lebanon and Anti-Lebanon, and the fruitful hills and valleys of Syria and Palestine. *The eastern and southern parts* are deserts, which extend over a large part of Arabia.

1511. *The lowlands on the coasts* of all these table lands, are, in many parts, fertile and populous.

1512. *The peninsulas of Hindoostan and Chin-India* have each a distinct system of highlands and lowlands, which will be described separately.

II. *Exercises on the Physical Map of Asia. Sea-Coast.* — Is the coast

II. 1501. Describe the Himalaya Mountains. 1502. The Altaian. 1503. The Mountains of China. 1504. The western table lands. 1505. Iran. 1506. Its mountains. 1507. What countries form the passage from Iran to Asia Minor? 1508. Describe Asia Minor. 1509. Where is the Syrian-Arabian table land? 1510. What does the western part contain? The eastern and southern? 1511. What can you say of the lowlands around these table lands? 1512. Of the southern peninsula?

of Asia much indented by branches of the ocean? What seas are there W. of Asia? Where is the Isthmus of Suez, which unites it to Africa? What straits lead to the Red Sea? Where is the Sea of Arabia? What gulfs and bays in the South of Asia? What seas on the S. E.? What gulf or sea E. of Mandshuria?

Islands. — What large islands on the coast of Mandshuria? What on the coast of China? What E. and S. of Chin-India? What is their general form? What appears to be their surface? Which is the largest of the northern islands? What large island S. of Hindoostan?

Highlands. — What table land do you find in the centre of Asia? What great table lands W. of it? How far do the table lands extend on the W.? (¶ 1504.) On the E.? What portions of Asia lie N. of this belt? What S.? What mountains form the northern border of the central table land? The southern? The western? (¶ 1498.) What regions bound it on the E.? What mountains cross the central plateau of Asia, and how do they divide it? What desert does it contain? Describe the course and names of the mountains on the N. What mountains form the continuation of the southern border of the plateau in China? What mountain ranges pass from the table land into China and Mandshuria?

What table land lies next W. of the central plateau? How is the table land of Iran bordered on the N., E., S., and S.-W.? What passes to it on the E. and S.-E.? What desert on this table land?

What is the most western portion of the belt of table lands? By what mountain and coasts is it bordered? 1508. What smaller table lands lie between Asia Minor and Iran? What river valley separates them from the Caucasus? What valley borders them on the S.-W.? What table land extends S. from Koordistan and Asia Minor? What mountains in Syria? What desert on the table land, and where does it terminate? Where is Mt. Sinai?

Declivities, Terraces, and Lowlands. — What forms the northern declivity of the central table land? How is the lowland of Siberia bordered on the N., E., S., and W.? What lowland, connected with this, borders the plateau on the W.? To what sea does it extend? What sea does it embrace? What lowland E. of the central plateau? What peninsulas extend from the plateau towards the S.?

Lakes and Inland Seas. — Where do you find the two great inland seas of Asia? What lakes on the western table lands? What are the principal on the central plateau? Do you find any large lakes in the southern peninsulas?

Rivers. — What are the great rivers of the northern declivity of Asia, beginning at the E.?

Where is the R. Oby? What two branches has it? What branches has the Yenesei? Through what lake does one of its branches pass? What three great rivers on the eastern declivity of Asia? What river empties into the China Sea? What are the great rivers of Chin-India? What rivers in the N. of Hindoostan? What branches has the Ganges? What rivers empty into the Sea of Aral? Where do all the rivers which have been mentioned rise?

What great rivers rise in the western table lands? What rivers are there on the central table land? What in Iran? What rivers in the southern part of Hindoostan? Are there any large rivers in Arabia? What in Asia Minor? Describe the source, course, and mouth, of the rivers already named, in the same order.

I. DECLIVITIES AND LOWLANDS.

1513. *The southern declivity of Asia* comprises the Indian peninsulas. *The eastern declivity contains* the rugged

mountain land of Mandshuria, and the mountain land and lowlands of China.

1514. *The northern declivity* forms the vast lowland region of Siberia, traversed by numerous and large rivers, but covered with snow and ice during the greater part of the year. *A large portion of it consists of* steppes and swamps.

1515. *The western declivity of the central table land* descends towards the Caspian Sea. *It is called* by the Persians, Turan, and by English geographers, Independent Tartary.

A part of this declivity, around the Caspian Sea, is from 70 to 90 feet below the level of the Mediterranean Sea.

1516. *On the South-West, the table lands descend* in terraces, in the valleys of the Euphrates and Tigris. They are barren *at the North*, but fertile *towards the South* when they are well watered by canals.

I. 1513. What does the southern declivity of Asia comprise? 1514. The northern? 1515. The western? 1516. The south-western?

I. PHYSICAL AND POLITICAL DIVISIONS.

I. *Pol. M. of A.* — What great lowland on the North of Asia? What country occupies it? What three peninsulas in the South of Asia? What country occupies the western peninsula? What the middle peninsula? What countries do you find in the eastern peninsula? What countries occupy the table lands W. of the River Indus? What are on the central table land? What on its eastern declivity? What empire is situated on islands, on the eastern coast?

I. EXERCISES ON SITUATION.

Point out, on the Political Map of Asia, the following oceans, seas, capes, straits, rivers, mountains, &c., and describe their situation.

Oceans. — Arctic, Pacific, Indian.

Seas, Bays, and Gulfs. — Mediterranean Sea, Red Sea, S. of Arabia, Persian Gulf, G. of Ormus, Bay of Bengal, G. of Siam, G. of Tonkin, Yellow Sea, S. of Japan, S. of Okotsk, S. of Kamschatka, G. of Yenisei, G. of Oby, Sea of Aral, Caspian Sea, Sea of Azof, Black Sea, S. of Marmora.

Capes. — N. East Cape, East C., Capes Chalagskoi, Lopatka, Cambodia, Romania, Comorin, al Gate.

Straits. — Beering's, Channel of Tartary, Str. of Corea, Formosa, Malacca, Ormus, Babelmandel.

Rivers. — Oby, Yenisei, Lena, Amoor, Hoangho, Yangtse Kiang, Cambodia, Menam, Irawaddy, Burrampooter, Ganges, Godavery, Kistna, Nerbudda, Indus, Tigris, Euphrates, Kur, Sihon, Jihon.

Mountains. — Ural, Altaian, Kuen-Lun, Himmalaya, Sine Shan, Nanling, Peling, Belur Tag, Hindoo Koosh, Zagros, Ramli, Elburus, Ararat, Caucasus, Taurus, Sinai.

Deserts. — Syrian D., Great D. of Arabia, Great Salt D., D. of Sind, Great D. of Gobi or Shamo.

Lakes. — Caspian Sea, S. of Aral. (These are in fact large lakes.) L. Baikal, L. Balkash, L. Tchany, L. Van, L. Ooroomia, Dead Sea, Sea of Tiberias, or Galilee.

Islands. — New Siberia, Beering's I., Koorile, Saghalien, Yesso, Niphon,

Formosa, Hainan, Andaman Is., Nicobar Is., Ceylon, Maldives, Laccadives, Cyprus, Rhodes.

Peninsulas. — Asia Minor, Arabia, Hindoostan, Chin-India, Malacca, Corea, Kamschatka.

Relative Situations, or Courses and Bearings. — What large cities of Asia lie on or near the Tropic of Cancer? In what direction is Pekin from Constantinople? What city of N. America is nearly in the same latitude with Pekin? Which way is it from Constantinople to Smyrna? Smyrna to Aleppo? Aleppo to Jerusalem? Through what waters would you sail, and what would be your different courses, in going from France to Cairo, Suez, Mocha, Muskat, Bombay, Calcutta, Sumatra, and Canton? What is the general direction of the coast, from Malacca to Kamschatka?

II. NAVIGATION.

1517. Asia has a small *proportion of sea-coast* which can be used for commerce, (¶ 260;) but its southern, south-eastern, and western coasts have numerous bays, harbors, and peninsulas, which are open to foreign trade.

1518. *The northern declivity of Asia* abounds in great rivers; but they are frozen during the greater part of the year, and of little use for commerce.

1519. *China* is traversed by two great rivers, with numerous branches, and connected by canals, so that inland navigation is extended throughout the whole empire North of the Nanling. Steamers can ascend these rivers for a considerable distance.

1520. *Chin-India* abounds with large rivers, connected in the lower course by numerous branches, on which an extensive commerce is carried on in boats.

1521. *The Ganges* is navigable nearly 1400 miles, to the foot of the Himalaya Mountains, and is said to give employment to 300,000 boatmen.

1522. *The eastern coast of Hindoostan* has no good harbors to receive ships from the ocean; but the streams furnish many channels of inland navigation. The steepness of *the western coast* renders the rivers generally too rapid for navigation.

1523. *The River Indus* affords navigation for vessels of considerable size to Moultan; and the eastern branches are connected with those of the Ganges, by canals.

1524. *The table lands* of Asia are almost destitute of inland navigation; but the Euphrates and Tigris furnish navigation to the borders of Persia and the Syrian table land.

1525. *Arabia* has a few harbors on the coast, and *Asia Minor* many; but both are destitute of navigable rivers.

1526. *The countries on the Caspian Sea, and the Sea of Aral,* have only a limited commerce on these seas and their streams. In these regions, and on the table lands, the greater part of *the trade is carried on* overland, by large caravans, on horses, mules, and camels.

II. N. 1517. What can you say of the coast of Asia? 1518. What of navigation on the rivers of the northern declivity? 1519. On those of China? 1520. Of Chin-India? 1521. Of the Ganges? 1522. Of the coast of Hindoostan? 1523. Of the Indus? 1524. Of the table lands? 1525. Of Arabia? 1526. What commerce have the countries on the Caspian Sea?

II. CLIMATE AND PRODUCTIONS.

1527. *Asia extends* through all the regions, from the Equatorial to the Frozen, and thus possesses every kind of climate and productions.

1528. *In the northern regions of Siberia and Kamschatka,* the ground is covered with snow for the greater part of the year, and remains frozen *even in summer,* at a short distance below the surface.

1529. *The summer* is short, but very hot, producing clouds of insects, and causes the plants to grow with a rapidity unknown in temperate countries; but *grain* ripens only in the southern parts.

1530. *The middle regions of Asia* have so many table lands, that the climate depends chiefly on the elevation. But they have generally a continental climate, with severe winters and hot summers.

1531. *The lowlands of Asia Minor and Syria* belong to the Warm and Hot Regions, and have the corresponding productions.

1532. *The eastern coast* of Asia, like that of North America, is much colder than the western in the same latitudes; and the Chinese of the lowlands suffer with cold, in the latitude of Asia Minor.

1533. *The southern peninsulas of Asia, and the lowlands of the western table land,* belong to the Hot and Equatorial Regions.

1534. *The lowlands of Arabia and Persia* are intensely hot and dry. *The plains and valleys of Hindoostan and Chin-India* are generally preserved from this burning heat by the number and size of their streams, and the winds from the ocean which surrounds them.

1535. All these southern countries are rich in *the productions* of the Equatorial Regions; and Arabia, Ceylon, and some of the islands on the South-East, produce the richest *gums, perfumes, and spices.*

1536. *The table lands of Hindoostan and Chin-India* have a delightful climate; and the mountains rise to the limit of perpetual snow, so that they have the temperature of every region, from the equator to the poles.

III. INHABITANTS.

1537. *The inhabitants of Asia* belong to three distinct races: 1st, the Asiatic race, in Siberia, China, Chin-India, and the central table land; 2d, the European race, South of these, from the Mediterranean and Black Seas, to the Ganges; 3d, the Malay race, on the peninsula of Malacca.

1538. *The nations of Siberia and Kamschatka* are Pagans, and in all respects in the savage state, except the Russian colonists and exiles, who are collected in the towns.

1539. *The steppes of Middle Asia* are inhabited by wandering tribes; and *its oases,* by a few settled nations in the barbarous state.

1540. *China and Southern and Western Asia,* including Persia and Af-

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II. C. P. 1527. Through what regions does Asia extend? 1528. What is the climate of Siberia and Kamschatka? 1529. How is the summer here? 1530. What is the climate of the middle regions? 1531. Of the lowlands of Asia Minor and Syria? 1532. Of the eastern coast of Asia? 1533. Of the southern peninsulas? 1534. Of the lowlands of Persia and Arabia? Of Hindoostan and Chin-India? 1535. What are the productions of the southern countries? 1536. What can you say of the table lands?

III. I. 1537. How many races of men in Asia? 1538. What can you say of the nations of Siberia and Kamschatka? 1539. Who inhabit the steppes of Middle Asia? 1540. What is the state of civilization in China, and Southern and Western Asia?

ghanistan, are in the half civilized state. The inhabitants possess much *knowledge* and great skill in some of the *arts*, but are ignorant of much that is known to civilized nations.

1541. *The nations East of the River Indus* are Pagan, with a small mixture of Mahometans; and many of their customs, and even of their religious ceremonies, are wicked and cruel.

1542. *The nations West of the Indus* are Mahometans, and abhor the cruel ceremonies of the Pagan religion. But they are far from practising the justice or kindness of Christian nations.

1543. There are *Jews* scattered through most parts of Asia. The Armenians, Nestorians, and a few small tribes elsewhere, are the only *native Christians of Asia;* and *the Bible* is so little known among them, that many resemble the people around them too much in their customs.

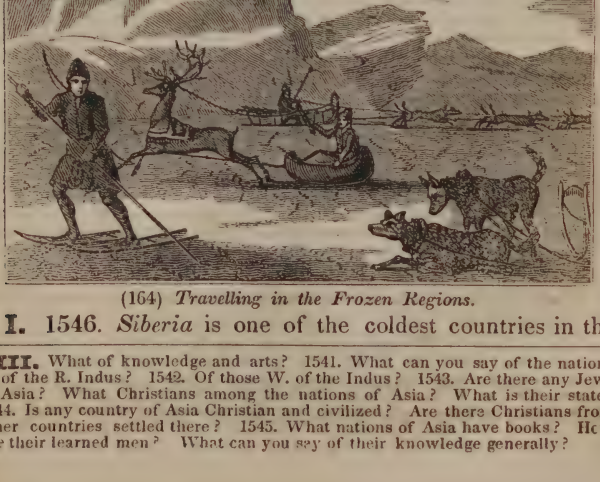
1544. There is no *entire country of Asia which is Christian and civilized;* but many Christian merchants, officers, and missionaries, from Europe and America, are settled in Hindoostan, and other parts of Asia; and in some countries, considerable numbers of the natives have become Christians.

1545. *The settled nations of Asia* have written languages, and possess books; and in some countries, all the people are taught to read. *The learned men* are also acquainted with the sciences to some extent; but all *their knowledge* is imperfect, where they have not been taught by foreigners.

NORTHERN ASIA.

I. *Pol. M. Asia.* — What country occupies that part of Asia N. of 50° N. latitude?

RUSSIA IN ASIA, OR SIBERIA.



(164) *Travelling in the Frozen Regions.*

I. 1546. *Siberia* is one of the coldest countries in the

III. What of knowledge and arts? 1541. What can you say of the nations E. of the R. Indus? 1542. Of those W. of the Indus? 1543. Are there any Jews in Asia? What Christians among the nations of Asia? What is their state? 1544. Is any country of Asia Christian and civilized? Are there Christians from other countries settled there? 1545. What nations of Asia have books? How are their learned men? What can you say of their knowledge generally?

inhabited world; and the ground is frozen, in the northern parts, to the depth of 50 feet.

1547. *In summer*, the surface of the ground thaws into mud for a few feet; but *the people travel* chiefly over the snow in winter, in sledges drawn by dogs or reindeer.

I. *Pol. M. A.* — Where is Siberia? How is it bounded? What are some of the largest towns? What is remarkable in its climate? (¶ 1546.) Its surface and modes of travelling? (¶ 1547.)

II. 1548. *Siberia contains* one third of Asia, and is larger than all Europe. *The greater part of it* is a barren region of steppes or frozen swamps; but *the southern borders* have a milder climate, and produce grain. (*See* ¶ 1528, 1529.)

1549. *Fish* abound in the rivers; and *furred animals*, such as the bear, the fox, and the ermine, on the plains; and these furnish most of *the food and clothing of the natives.*

1550. The mountains around Siberia contain valuable *mines* of iron, copper, gold, silver, and precious stones; and immense numbers of elephants are found buried in the lowlands in the North, whose tusks furnish large quantities of *ivory.*

II. What peninsula is there in the eastern part of Russia in Asia? What islands W. and S. of it? What islands in the Arctic Ocean? Which way do the rivers of Siberia run? What are the principal rivers? What lake in the South? What is the chief river flowing into Lake Baikal? What river flows from it into the Yenisei?

III. 1551. The products of its mines and elephants, and the rich furs of its animals, give Siberia a great deal of *commerce*; and *the caravan trade* between Russia and China passes through it. *Manufactures* are scarcely begun.

1552. Siberia is a part of the Russian empire, and has been made *a place of banishment* and labor for criminals and persons who offend the government. These, and other colonists and officers from Russia, are collected in large *towns*, in which we find knowledge, arts, and civilization.

1553. *The remainder of the inhabitants* are in the savage state, except a few tribes supported by pasturage.

III. What towns do you find in Siberia among the Ural Mountains? (*Catherinburg is the central place of the mines of the Ural, on the great road from Russia.*) What towns do you pass through in going from Catherinburg to Kamschatka? What rivers do you cross? What towns do you find in Kamschatka? What town lies on Lake Baikal? Where is Kiachta, the seat of the trade with China? What other towns in the southern part of Siberia?

See, on the Chart of Climates, in what regions Siberia lies. What is the government? (*See Moral Chart.*) The prevailing religion? The state of civilization?

MIDDLE COUNTRIES OF ASIA.

What countries of Asia lie in the middle regions of Asia, between 25° and 50° N. latitude?

TURKEY IN ASIA.

I. 1554. *The Turks*, like other people of Asia, generally dress in loose garments, sit on the ground or floor, and

have many other customs unlike ours. They visit the Sweet Waters, or Springs, near Constantinople, as a place

(165) *Turks visiting the Sweet Waters, or Springs.*

of amusement; and the engraving represents their pavilions, and their rude carriages drawn by oxen.

I. *Pol. M. A.* — How is Turkey in Asia bounded? What is its capital? (*It is a part of the same empire with Turkey in Europe, and has the same capital.*) What is remarkable in the customs of the Turks? (¶ 1554.)

II. 1555. *Turkey in Asia lies* chiefly on table lands, and its surface is generally rugged. *The eastern part of Syria* is a desert of sand, sloping towards the River Euphrates.

1556. *The soil* is fertile only in the valleys and the lowlands of the coast; and there, *the climate* is hot. *In the highlands*, it is temperate or cold. *The productions* include those of the Hot and Temperate Regions, and are valuable.

II. What peninsula forms the western part of Turkey in Asia? What mountains and table lands does it contain? What desert is there on the borders of Turkey and Arabia? What mountains in Syria? (*See Map of Syria and Palestine.*) What rivers in Turkey in Asia?

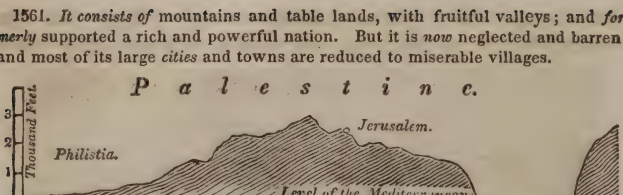
III. 1557. *Turkey in Asia was once* celebrated for its arts and science, and its numerous large cities; but the *greater part of it is now* covered with ruins, and inhabited by barbarous, wandering tribes, especially in the highlands.

1558. *The Turks* who inhabit the cities resemble those of Europe, but are less intelligent and enterprising. They have little *knowledge* but that of the Koran, or sacred book of Mahomet; and *agriculture, arts, and manufactures* are neglected.

1559. Turkey is still celebrated for its rich carpets, and some other *manufactures of wool and silk.* These, with the valuable productions of the earth, give it considerable *commerce*, which is carried on chiefly by foreigners.

1560. PALESTINE, or the Holy Land, — the country of the ancient Israelites, and the scene of our Savior's life and sufferings, — lies in the southern part of Syria

1561. *It consists of* mountains and table lands, with fruitful valleys; and *formerly* supported a rich and powerful nation. But it is *now* neglected and barren and most of its large *cities* and towns are reduced to miserable villages.



(166) *Profile of Palestine.*

1562. Palestine is separated from the land of the ancient Moabites and Ammonites by a deep chasm called the *Valley of Ghor*. It contains the River Jordan, the Sea of Tiberias, and the Dead Sea; and is from 300 to 1300 feet below the level of the Mediterranean Sea, as represented in the preceding profile.

III. What seaports has Turkey on the Black Sea? What on the Ægean Sea, or Archipelago, and the coast of Syria? What cities in the interior of Asia Minor? What in the north-eastern part of Turkey? What towns and cities in the interior of Syria? Where are the ruins of Palmyra? What cities on the Tigris and Euphrates? What river runs East of Palestine? (*See marginal Map of Syria.*) What lakes does it form? What is remarkable about its valley? (¶ 1562.) What towns do you find in Palestine? What is the height of Jerusalem above the Mediterranean Sea? (*See Profile, and scale of feet at the side.*) How high is it above the Dead Sea?

ARMENIA, KOORDISTAN, AND ADERBIJAN.

I. 1563. *Armenia, Koordistan, and Aderbijan*, are mountain lands connecting the table lands of Asia Minor and Persia. *They belong* chiefly to Turkey, and in part to Persia and the Russian Empire; but *they are occupied* principally by the Armenian and Nestorian Christians, and are thus distinct countries.

I. *Pol. M. A. and E.* — Where is Armenia? Where is Erivan, its chief city? What towns do you find in this region? What country next S.-E.?

II. 1564. *These countries* are rugged and mountainous; but *the valleys* are fertile, and *the mountain pastures* are rich.

1565. *The climate* is mild or hot in the valleys; but *in the highlands* the winters are severe.

II. What table lands do you find in this region? What lakes? What rivers rise here? What mountain is there, on which it is supposed the ark of Noah rested?

III. 1566. The mountains of Armenia contain *mines* of gold, silver, and copper, and this country supplies a large part of Turkey with *manufactures* of copper.

1567. *The Armenians* and *Nestorians* are civilized and Christian nations, though less improved than Europeans. *The Armenians are distinguished* for their honesty and enterprise, and are the chief merchants and bankers of Turkey.

1568. *The Pagan Koords* are barbarous, and subsist chiefly by robbery. They have lately almost destroyed the mountain tribe of Nestorians.

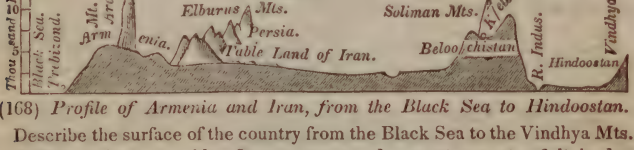
PERSIA.

(167) *Travelling in Persia.*

I. 1569. *The Persians usually travel* on camels; and here, as in most countries of Asia, the women are shut up, or cover their faces with a thick veil when they go out.

I. *Pol. M. A.* — How is Persia bounded? What is its capital, and what? What peculiar customs in Persia? (¶ 1569.)

II. 1570. *Persia is situated* on the table land of Iran, and its surface is represented in the following profile.



(168) *Profile of Armenia and Iran, from the Black Sea to Hindoostan.*

Describe the surface of the country from the Black Sea to the Vindhya Mts.

1571. *It is watered* by few streams; *the greater part of it* is dry and barren; and considerable tracts are entirely desert.

1572. *The climate* on the lowlands of the Persian Gulf is intensely hot; and *the table lands* have excessive heat and severe cold.

1573. *Some of the terraces and valleys*, between the border mountains, have a warm but mild climate, and a fertile, well-watered soil, which give them a rich vegetation. They are called "paradise" by the Persians.

II. What mountains border Persia on the N.? On the E.? On the W.? What sea or salt lake has it? What rivers?

III. 1574. *The people of Persia* are ignorant and indolent. *Agriculture, arts, and manufactures* are neglected; and this kingdom, which was formerly distinguished for learning, wealth, and power, is now poor and feeble.

III. Where is Ispahan, the former capital of Persia? What cities are there in the southern part? What in the northern part? What seaport on the Persian Gulf?

EASTERN IRAN,

OR AFGHANISTAN AND BELOOCHISTAN.

(169) *Afghan Soldiers.*

I. 1575. *Eastern Iran* contains several distinct states, of which Afghanistan and Beloochistan are the principal. The men are all soldiers, and disposed to robbery; and wars are so frequent, that the boundaries and government of the states are frequently changed.

I. *Pol. M. A.*—How is Eastern Iran bounded? (*It extends from Persia to the Solyman Mountains.*) What are the great divisions? (*See also* ¶ 1575.) What can you say of the inhabitants and the boundaries of the states? (¶ 1575.) What are the capital cities?

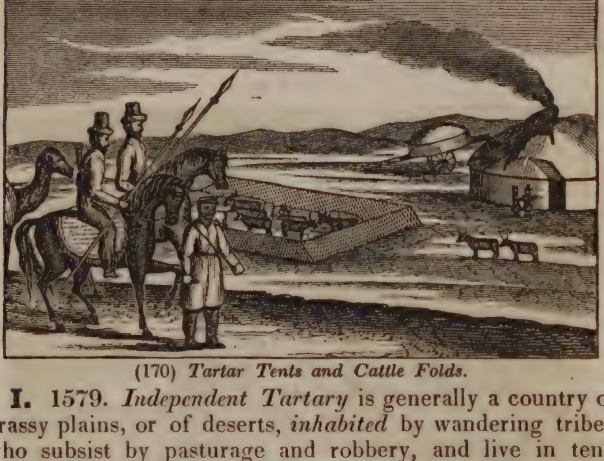
II. 1576. Eastern Iran is a rugged, mountainous, elevated region. *The heat of summer* is scorching, *but the cold of winter* is severe on account of the elevation; and the productions of the earth are scanty.

II. What mountains are there around Eastern Iran? What passes are there through the Solyman Mountains? What river flows through them? Where is the Bolan pass? What cities in the northern parts? What in Beloochistan?

III. 1577. There are some populous *cities*, but *a large part of the inhabitants* are wandering tribes, in a half-barbarous state, and pay little attention to agriculture, manufactures, or commerce.

1578. *The Afghans* are the most numerous, civilized, and powerful people, and once governed the whole of Eastern Iran. *The Beloochees*, who occupy the southern part, are all herdsmen and robbers.

INDEPENDENT TARTARY.



(170) *Tartar Tents and Cattle Folds.*

I. 1579. *Independent Tartary* is generally a country of grassy plains, or of deserts, *inhabited* by wandering tribes, who subsist by pasturage and robbery, and live in tents made of coarse woollen cloth, or of felt. Some tribes have settled in *states*, in the oases bordering on the rivers.

I. *Pol. M. A.* — How is Independent Tartary bounded? What states has it? What cities? What can you say of it? (¶ 1579.) What of its inhabitants?

II. 1580. *The eastern part* of Independent Tartary is a rugged mountain land, inhabited by independent tribes. *The western part* consists chiefly of deserts of moving sand, with some fertile oases and river valleys.

III. 1581. Khiva, Bokhara, and Kokand, are *the principal kingdoms or khanates.* But *the condition and divisions of the country* vary with the motions of the sands and the wars of the people.

1582. *These countries were formerly* very flourishing, as the centre of trade between Europe and the centre of Asia. But the trade is now diminished; and many of the cities have fallen to ruins.

1583. *They were once celebrated* for learning and the arts; and Bokhara still contains numerous *schools and colleges*, for the study of the Mahometan law and religion, which are said to have 10,000 students.

III. What rivers are there in Independent Tartary? Where are Khiva and Bokhara? Where is Kokand? What sea does Independent Tartary contain? What country is there in the northern part?

CHINESE EMPIRE.

I. 1584. The Chinese Empire is the most populous in the world, and one of the most extensive. It embraces

China, Corea, Mandshuria, and the countries on the central table land of Asia, usually called Chinese Tartary.

I. *Pol. M. A.* — In what part of Asia is China? Where are Mandshuria and Corea? In what direction from China are the countries of the central table land?

CHINA.

(171) *Chinese Dress and Customs.*

I. 1585. *China* is so crowded with inhabitants, that in many parts, families live in boats on the water. *The buildings, dress, and customs of the people,* are all unlike ours.

I. *Pol. M. A.* — How is China bounded? What is its capital? In what part of the kingdom? What is remarkable in China? (¶ 1585.)

II. 1586. The declivity of the table land occupies *the western part of China*, and renders it mountainous. *The eastern part* is a rich lowland, traversed by large rivers and canals.

1587. China has every variety of *soil;* but the people are so industrious, that almost every spot is *cultivated*, even to the tops of the mountains. In this way it *supports* twenty times as many people as the United States, on a smaller territory.

1588. China has *the climate and productions* of the Hot, Warm, and Temperate Regions, and thus supplies its own wants. *The most remarkable product* is tea, which is exported to almost all civilized countries.

II. What mountains are there in the South of China? What in the North? What are the two great rivers of China? What river S. of the Nanling Mountains? What river N. of the Hoang-ho? What islands on the coast of China?

III. 1589. *The Chinese* are industrious, and very skilful in *agriculture* and many

of *the arts*. *Their manufactures* are numerous and valuable; and *their commerce* is extensive, both in native and foreign vessels.

1590. The Chinese have for ages printed *books* from blocks of wood; and *their own learning* is encouraged by government, but not that *of other nations*.

1591. *The Portuguese have a settlement* at Macao, at the mouth of the river below Canton; and *the British* possess the island of Hong Kong, which lies near it.

III. What wall do you find North of China, and how far does it extend? On what river is Pekin? What other cities in the northern part of China? What are some of the principal seaports of China? What city on the river above Macao?

CHINESE TARTARY

I. 1592. *Chinese Tartary includes* Corea, Mandshuria, and the countries on the central table land. *The most remarkable country* is Thibet, whose ruler is *the Grand Lama*. He is the head of their religion, and a kind of living idol, worshipped by most of the tribes of the table land, and many others in Asia.

When the Grand Lama dies, his worshippers believe that his soul passes into the body of some child, who is sought for by the priests, and placed upon the throne.

I. *Pol. M. A.* — How is Chinese Tartary bounded? Where is Mandshuria? What is most remarkable in Chinese Tartary? (¶ 1592.) Corea? Thibet? Mention some of the towns in each division.

II. 1593. *Mandshuria* is a well-watered mountain land; and *Corea* is a fertile and populous peninsula. But *the countries on the table land* consist chiefly of steppes and deserts, with few *streams and lakes*, and have no fertile *soil*, except on their borders.

1594. *The climate* is hot in summer, and severely cold in winter; and so *dry*, that in many parts, meat can be preserved without salt.

II. What mountains border Chinese Tartary? What ranges cross it? What lakes and rivers on the table land? What great river in Mandshuria?

III. 1595. Many of the steppes furnish rich *pastures*; and most of *the people* are wandering, barbarous tribes. Some are *settled*, and have large towns, and a considerable share of the trade from China to Western Asia; but none are *well known* to us.

III. What are the chief political divisions of Chinese Tartary? What towns in Mandshuria and Corea? What in the northern part of the table land? The western? The southern?

JAPAN.

I. 1596. *The Empire of Japan comprises* the three islands of Jesso or Yesso, Niphon, and Kiusiu, with several smaller islands.

1597. *The dresses of the Japanese*, as well as their build-

ings, customs, and mode of living, resemble those of the Chinese, but are entirely unlike those of Europeans.

(172) *Japanese in their Dresses.*

I. *Pol. M. A.*— Where does the empire of Japan lie? What islands does it comprise? (¶ 1596.) What portions of water bound it? Which is the largest island? Which is the most southern? The most northern? What is the capital, and where?

II. 1598. *The Empire of Japan* is like Great Britain in its situation. *The islands are traversed* by mountains, with several volcanic peaks; but they contain rich *mines*, and a great deal of fertile *land*, which is highly *cultivated.*

1599. *The climate* is cold in the northern parts. *In the southern, it is warm, and produces* tea, rice, cotton, and other plants of the Warm Regions.

III. 1600. *The Japanese are remarkable*, among Asiatics, for their knowledge and industry. *Books* are printed among them from blocks of wood, as in China; and they have many books of science, history, and poetry.

1601. *They surpass all other nations of Asia* in agriculture, manufactures, and internal commerce, in their roads and posts for letters, and in the regularity and justice of the government, although it is often cruel and tyrannical. *Foreign commerce* is allowed only with the Chinese and Dutch, at the single port of Nangasaki; and we know little of the geography of the empire.

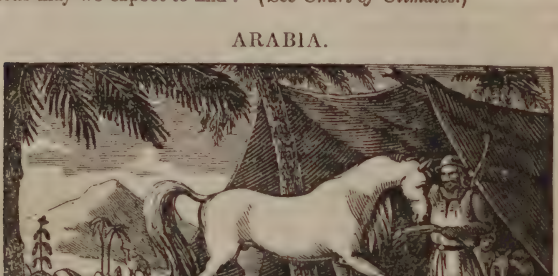
1602. Japan has two *emperors*—*the Dairi*, who takes care of religion and education, and *the Kubo*, or general of the army, who really governs the country.

III. What countries of Europe are in the same latitude with Japan? What of America? (*See Map of N. Am.*) What island lies North of it, belonging to Mandshuria? What other towns do you find, beside the capital? Where is Nangasaki?

SOUTHERN COUNTRIES OF ASIA.

I. *Pol. M. A.* — What countries of Asia lie chiefly South of latitude 25°? In what zone is the greater part of them? What climate and productions may we expect to find? (*See Chart of Climates.*)

ARABIA.



(173) *Arabs in their Tents.*

I. 1603. *The greater part of Arabia consists* of steppes and deserts. *They are inhabited* by wandering tribes, who live in tents and subsist on the milk and flesh of their camels and other cattle, and by the robbery of travellers.

1604. *Their horses* are the swiftest in the world; and the Arabs take as much care of them as of their children.

On the peninsula, at the head of the Red Sea, are *Mt. Sinai*, from which the Law of God was given, and *Mt. Horeb*. They are visited by numerous pilgrims. Mecca, which was the birthplace of Mahomet, is considered the capital.

I. *Pol. M. A.* — How is Arabia bounded? Where is Mecca? Of what does Arabia consist? (¶ 1603.) How inhabited? What is remarkable among the Arabs? (¶ 1604.)

II. 1605. *The only fertile parts of Arabia* are the oases in the desert, and the coasts of Oman, on the South-East, and of Yemen, or the Happy Arabia, (Arabia Felix,) on the South-West.

1606. *The climate* of Arabia is scorching, and, in the deserts and lowlands of the coast, almost insupportable to strangers. *The well-watered regions yield* coffee, the richest gums and spices, and other productions of the Torrid Zone.

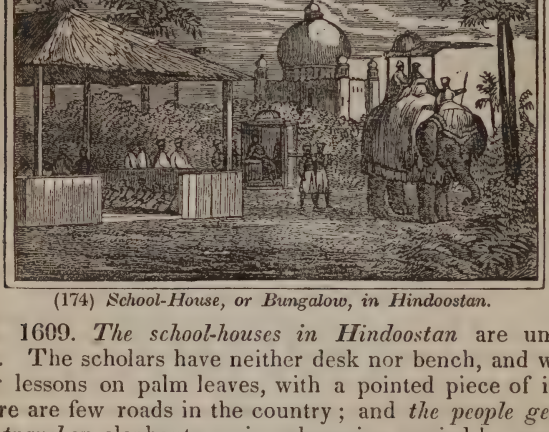
II. What isthmus connects Arabia with Africa? What table lands do you find? What mountains? Where is the lowland of Tehama? Do you find any large rivers in Arabia?

III. 1607. *The Arabians are divided* into numerous independent tribes and small states. *Yemen* and *Oman* are well-cultivated, flourishing states. *The sultan of Oman*, or Muscat, has extensive commerce, in his own ships, and a considerable navy, and has conquered a large part of the Eastern coast of Africa.

1608. *The people of the towns* are more corrupt, and not more civilized, than the wandering tribes; and *agriculture*, *manufactures*, and *commerce*, are neglected.

III. What are the divisions of Arabia known to us on the West? (*See Polit. Map of Asia.*) What on the East? What on the South? What in the centre? What seaports are there on the Red Sea? Which is the largest town here? What seaport on the Gulf of Ormus? What cities and towns are there in the interior? What town at the head of the Red Sea?

HINDOOSTAN.



(174) *School-House, or Bungalow, in Hindoostan.*

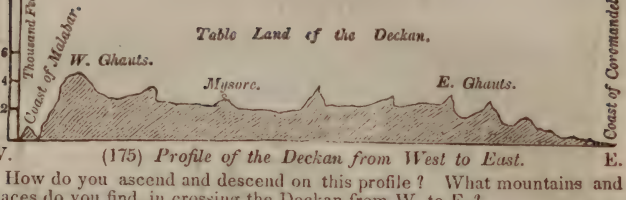
I. 1609. *The school-houses in Hindoostan* are unlike ours. The scholars have neither desk nor bench, and write their lessons on palm leaves, with a pointed piece of iron. There are few roads in the country; and *the people generally travel* on elephants, or in palanquins carried by men.

I. *Pol. M. A.* — How is Hindoostan bounded? What lofty mountains on the North? What is the chief city, at the mouth of the Ganges? What is remarkable in the customs of the people? (¶ 1609.)

II. 1610. *Hindoostan* is a peninsula, nearly triangular, shut in on the North and West by mountains, which have few passes.

1611. There are many fertile *terraces and table lands* among the Himalaya Mountains, some of which are the seat of independent kingdoms.

1612. *At the foot of the mountains* are the broad plains which form the basin of the Ganges; and South of these, the fertile table land *of the Deckan*, bordered by the Eastern and Western Ghauts, as represented in the following profile.



(175) *Profile of the Deckan from West to East.*

How do you ascend and descend on this profile? What mountains and places do you find, in crossing the Deckan from W. to E.?

1613. Hindoostan has every variety of *soil*. The north-western part is a sandy desert; but it is *generally* very fertile, and well-watered.

1614. *The climate and productions of the lowlands* are those of the Torrid Zone; but the heat is not generally so oppressive as that of Africa. In Assam, on the North-East, *tea* is cultivated. *The table lands and terraces* have every variety of climate, according to their height.

II. What mountains cross Hindoostan in the centre? What mountains border the table land of the Deckan? Where are the Nilgerry Hills, remarkable for their fine climate? What two great rivers in the northern part of Hindoostan? What rivers in the southern part? What large island near the southern cape? What small islands on the W.? What name is given to the eastern coast? The western?

III. 1615. Hindoostan contains various *states and nations*, with a great variety of character and condition. *A large part of the Hindoos* are feeble, mild, and peaceful. But they have generally no regard to truth or honesty, and their religion teaches them that they may drown their children, leave their friends to perish, and burn widows alive.

1616. *The greater part of Hindoostan* has been conquered, and is *possessed*, by the British. They also govern the large, fertile island of *Ceylon*, which *is celebrated* for its cinnamon and other spices.

III. What seaports are there on the Malabar coast? (*Bombay is on an island.*) What on the Coromandel coast? What other cities in the South? What between the Deckan and the Ganges? What on the Ganges, beginning at its mouth? What on the Indus? What cities near the Himalaya Mountains? What cities has Ceylon, and where? What groups of islands lie S. W. of Hindoostan?

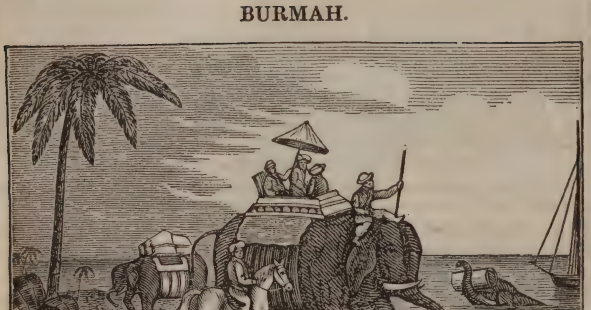
CHIN-INDIA.

I. 1617. *Chin-India*, or India beyond the Ganges, lies between the Ganges and the China Sea, and *includes* the empires of Burmah and Anam, with Siam, and a number of smaller states, little known.

Chin-India is an abbreviation for Chinese India; pronounced *Chine-In-di-a.*

1618. *Chin-India lies in* the Torrid Zone. It is watered by numerous streams, which render it fertile in all the productions of that zone.

BURMAH.



(176) *Elephants carrying Burdens.*

I. 1619. *Chin-India abounds* in elephants of great size and strength, which are trained to carry burdens, and even to assist in unloading ships. *Burmah is remarkable* for the white elephants, which are worshipped.

I. *Pol. M. A.* — How is Burmah bounded? What river runs through it? What is the capital? What remarkable animals here? (¶ 1619.)

II. 1620. *Burmah includes* several kingdoms, and is one of the most powerful states of Southern Asia. *It is traversed* by numerous streams, which give it great fertility.

1621. *The soil* is rich. *The climate* is hot, but more temperate and healthful than that of Hindoostan. *In the north*, it is so elevated as to produce wheat.

III. 1622. *The Burmans* are more intelligent and industrious than the Hindoos; and arts and manufactures are well understood. *Aracan* has been conquered by the British.

III. What towns in Burmah besides the capital? What islands S. of it? Where is Aracan? What towns do you find?

SIAM.

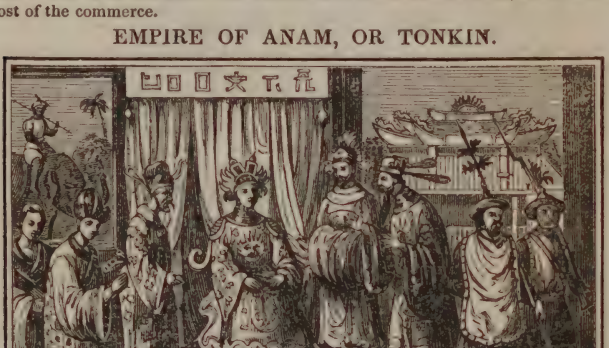
I. 1623. *In Siam*, as in some of the neighboring countries, the people are obliged to *build their houses* on posts, to avoid the annual floods of their rivers, which cover the country.

I. *Pol. M. A.* — Where is Siam? Between what kingdoms does it lie? (*Boundaries uncertain.*) What is its capital? What other towns? What is remarkable in the houses of Siam? (¶ 1623.)

II. 1624. *Siam lies* in an extensive and fertile valley, watered by the River Menam. *It is bordered by* mountains and mountainous regions, which are rugged and unproductive. *The climate* is hot, and *the productions* are valuable.

III. 1625. *The Siamese* are generally taught to read, and are intelligent and skilful in many of the arts. Great numbers of *Chinese* reside here, who carry on most of the commerce.

EMPIRE OF ANAM, OR TONKIN.



(177) *Dresses of the Emperor of Anam and his Subjects.*

I. 1626. *The Empire of Anam embraces* the kingdoms of Tonkin, Cochin-China, Cambodia, and some other small states, none of which are well known. The people dress in long, loose garments, which are different in each rank.

I. *Pol. M. A.* — Where are the kingdoms which compose the Empire of Anam? How is this empire bounded? What is its capital? What is there peculiar in the dress of the people? (¶ 1626.)

II. 1627. *The most important part of the Empire of Anam* appears to consist of the lowlands lying between the sea and the mountains. *They are* well-watered and fertile, and yield all the *productions* of the Torrid Zone.

III. 1628. *The people* of these countries appear to be intelligent, industrious, and skilful in many of the *arts*; and their *commerce* is valuable; but they have the ordinary *customs* of Pagan nations.

XII. What great river in Anam? What countries? What cities?

MALACCA.

I. 1629. *The peninsula of Malacca* forms the southern extremity of Chin-India, and *is occupied* by various tribes

of the Malay race. (¶ 552.) They are chiefly *remarkable* for their courage and cruelty as pirates; and the country has never been explored. *Singapore* belongs to the British.

I. *Pol. M. A.*— How is Malacca bounded? What is its southern cape? What island lies West of it? What towns do you find? Where is Singapore? For what are the people remarkable? (¶ 1629.)

III. CITIES OF ASIA.

1630. Asia abounds with *large cities*, but much inferior to those of Europe. *The buildings* are generally mean, and crowded with inhabitants. The *streets* are extremely narrow, irregular, and filthy, and not usually paved.

1631. *In Western Asia, the houses of the rich* are usually of stone, or of brick, which are sometimes only sun-dried. They are generally built around a court or space in the centre, from which they receive most of their light and air, and which is frequently adorned with gardens and fountains.

1632. The houses are often magnificent *within;* but they have few or no *windows* towards the street, and present to the traveller only a dismal succession of high walls, with here and there a lattice, producing the appearance of a range of prisons. *The roofs* are usually flat, so that the inhabitants can pass from one house to another, or even across the streets, by bridges, without descending. They often *sleep* on the house-top, in summer.

1633. *The houses of the poor* are usually low and mean, built of mud, or a mixture of small stones and mortar.

1634. Instead of churches, the Mahometan cities are adorned with *mosques*, which are often very splendid. They have minarets, or circular towers, with a gallery, from which a crier calls the people at the hour of prayer.

1635. The cities of *Turkey*, like others on the Mediterranean, are subject to the plague, which often destroys great numbers of the inhabitants.

1636. The cities of *Eastern* and *Southern Asia* (except a few in Hindoostan) are poorly built, and much inferior to those of Western Asia. The houses are generally low, thatched huts, formed of mud, or of bamboo.

1637. *These cities are built* of so slight materials, that they are frequently destroyed by fire, but are easily rebuilt. *The temples and pagodas* are generally the only buildings which have any beauty; and they are often splendidly adorned with gold and gilding, especially in China and Burmah.

1638. Most of the cities of Asia are surrounded with *walls*, usually of mud, or sun-dried bricks. Many of them are partially in *ruins*.

1639. *Astrachan* is a place of great trade, situated on an island in the Volga. Its population is a mixed assemblage of various nations. *Irkutsk*, the principal town of Eastern Siberia, is a place of considerable trade and population, resembling European cities in its churches and public buildings. *Catharinburg*, *Tobolsk*, and *Tomsk*, are important on account of the trade carried on through them, from Russia, to Siberia and China. *Tiflis* is noted for its warm baths.

1640. *Samarcand* was formerly the most renowned city of the East. *Bokhara* is a place of considerable trade and importance. Both are noted for their Mahometan colleges.

1641. *Aleppo* is the principal city of Asiatic Turkey. *Damascus* is beautifully situated on the River Pharpar. Both these cities are adorned with many fine buildings, and are important for their manufactures and commerce. *Smyrna* is the chief seat of foreign trade in Turkey. *Bagdad* is also an important seat of commerce, but meanly built. *Jerusalem* is built on the ruins of the ancient city, and is resorted to by Christian pilgrims.

1642. *Teheran* is chiefly important as the residence of the king and court of Persia. *Ispahan*, the former capital, is still the first commercial city of

Persia. It was formerly a city of immense size, and the principal mosques and palaces are still very grand. Its ruins are several miles in extent *Shiras* is celebrated for its fine climate, and for the beauty of its environs, as well as for its colleges. *Bushire* is the chief seaport of Persia.

1643. *Mecca* is celebrated as the birthplace of Mahomet. It is well built, and derives great wealth from the immense concourse of Mahometan pilgrims. *Medina* is meanly built. It contains the tomb of Mahomet.

1644. *Sana* is considered the largest and most populous city of Arabia. *Mocha* is the chief seaport of Arabia, and the seat of its trade with Europe.

1645. *Cabul* is an ancient city. It has an extensive trade with Tartary, Persia, and India. *Peshawer* is one of the residences of the king of Cabul, and the resort of people from all parts of India and Western Asia.

1646. *Calcutta* is the metropolis of British India. Its commerce is very extensive; and it is inhabited by merchants from every part of the globe. The houses of the English resemble European palaces. The natives inhabit a distinct portion of the town, built in the Asiatic manner.

1647. *Madras* is the capital of the British possessions in the South of India, and *Bombay* of those in the West. *Bombay* is situated on a small, barren island, near the coast, and has extensive commerce. *Columbo* is the British capital of Ceylon. It resembles the cities of Europe in appearance.

1648. *Goa* is a populous city and territory, possessed by the Portuguese. *Pondicherry* belongs to the French; and *Tranquebar*, to the Danes.

1649. *Benares* is the most populous city of India, and celebrated as a holy city, and a seat of learning. Many of its houses are large and well built, and it is crowded with persons from all parts of India, who come here to die. *Delhi*, the former capital of Hindoostan, is now much reduced. *Poonah* is the modern capital of the empire of the Mahrattas.

1650. *Ava* is the present residence of the emperor of Burmah. *Bankok* is a considerable city, built in part on rafts in the river. *Kesho*, the capital of Tonkin, has some wide streets and good buildings. *Faifo* is a seaport of Cochin-China, sometimes visited by Europeans. *Malacca* contains many good houses of stone, and has a college founded by English missionaries.

1651. *China* abounds in large cities; but we know only the names of most of them. *Pekin* is probably the most extensive and populous city in the world. It is the residence of the emperor of China. *Nankin*, the former residence of the emperor, is distinguished for its porcelain tower, and for the cotton cloth called nankeen. *Canton* is the principal port in China, at which Europeans and Americans trade. *All the cities known in China* are very uniform in their appearance and mode of building, and remarkable for their crowded population, and for the trades carried on in the streets.

1652. *Moukden or Chen Yang*, the capital of the Mandshur Tartars, is said to be an extensive city. *Cashgar* is the residence of the Chinese governor of Tartary. *Lassa* is the residence of the Grand Lama of Tibet, and is crowded with his worshippers, from all parts of Asia.

1653. *Jeddo* is one of the most populous cities on the globe. It is the residence of the emperor of Japan, whose palace is a city in itself. *Meaco* is the centre of religion and knowledge in the empire. *Nangasaki* is the only place in Japan at which Europeans are allowed to trade.

III. TRAVELS ON THE MAP OF ASIA.

1654. Begin on the northern coast of Asia, and travel on the map around the coast to Arabia; and then by the Red Sea to the Mediterranean and Black Seas; and mention the countries and places you pass, and what you recollect which is remarkable in each. Observe the seaports; then travel up the rivers; and finally, go over the mountains to the table lands, and remember what you have learned of the places you visit.

AFRICA.

I. 1655. AFRICA was *once celebrated* for science and arts; but it is *now* remarkable, chiefly, for its deserts scorched with heat, its fierce and noxious animals, and the ignorance and barbarism of its inhabitants. It is the least *known* and the least *important* division of the continents.

1656. *Africa resembles South America* in its compact form, (¶ 269,) but it differs from it in having its surface covered to a great extent with deserts and table lands, instead of rich plains, and it has few rivers.

I. *Qu. and Ex.*—1655. For what is Africa remarkable? 1656. How does it resemble S. America? How does it differ from it? What is the comparative size of Africa? (¶ 268.) What figure will enclose it? (¶ 269.) What can you say of its sea-coast and commerce? (¶ 270.) *Phys. M. of A.*—On which continent is Africa? In what zones does it lie? How is it bounded? What isthmus connects it with Asia? What is the most northern cape? Southern? Eastern? Western? What large island on the S.-E. belonging to Africa?

II. HIGHLANDS.

1657. *On every side of the southern half of Africa,* (*see* ¶ 271,) *we find the land* rising, in several terraces, to a great height, and rivers flowing down from a region in the interior. This must be *a table land,* still higher, which is called the table land of Southern Africa; but it is not well known.

1658. *The declivities of this table land* generally consist of two terraces, separated by ranges of mountains, as in the profile. Some of *the terraces* are dry and desert, like the Karroo terraces above the Cape of Good Hope; others are fertile, like the kingdom of Mocaranga, on the eastern coast.

(178) *Profile of the Terraces in South Africa.*

1659. *The Bokkeveld or Snow Mountains,* which separate the terraces at the South, appear to continue along the eastern and western coasts, with various names, to Cape Guardafui and the Gulf of Guinea, and to form similar terraces on all sides.

1660. *The Kong Mountains,* which run parallel to the coast of the Gulf of Guinea, form the border of another table land. It extends West to the coast of the Atlantic Ocean, and is called Upper Soudan.

II. H. 1657. What do we find in the southern half of Africa? 1658. What can you say of the declivities? Of the terraces? 1659. Describe the mountains at the South, and their continuation. 1660. What can you say of the Kong Mts.?

1661. The mountain land of *Abyssinia* lies on the North-East, and is probably a branch of the great table land.

The table land probably descends in terraces on the North also. The natives say that there is a chain of mountains here, called the Jibel Kumri.

1662. *The highlands* of the southern portion of Africa *are bordered on the North* by the Great Desert of Sahara and its neighboring plains. *North of the desert,* we find the small plateau of Barca on the North-East, and the more extensive table land of Barbary on the northern coast.

1663. *The table land of Barbary,* which contains the Barbary States, lies between the Sahara and the Mediterranean Sea. *It is bordered on the North* by the Lesser Atlas, which has a steep declivity towards the Mediterranean, and *on the South,* by the Greater Atlas, sloping towards the desert.

1664. *On the West* it reaches the High Atlas, whose declivity towards the Atlantic belongs to the empire of Morocco; but *all its chains of mountains* are irregular and broken.

II. TERRACES AND LOWLANDS.

1665. *The terraces around the great plateau* of Southern Africa have been already described. *The coasts* are bordered by narrow lowlands, varying very much in their character.

1666. In the temperate climate of *the Cape of Good Hope,* the lowland is well watered, fertile, and healthy. On *the eastern and western coast,* it is generally fertile, but excessively hot and unhealthy.

1667. *The lowland on the Red Sea* is a barren, scorching region of sand; and *the coast between the Cape of Good Hope and Southern Guinea* appears to be almost a desert.

1668. *In the middle regions is the great lowland of Africa. The western coast* is sandy and desert, near the sea. *In the basins of the Rivers Senegal and Gambia,* it is well watered and fertile; but it is so level, that the streams spread into shallow, unhealthy lakes and marshes.

1669. The country extending from Senegambia to the valley of the Nile is called *Lower Soudan,* and is so shut in by highlands and deserts, that it is very little known. *It is divided* into two parts by the mountain land of Houssa.

1670. *The western part* lies chiefly in the valley of the River Niger, and appears to be a rich, cultivated region, containing several powerful kingdoms. *The eastern part* is a very moist region, abounding in streams. *Some of these* are lost in the sands of the Sahara; but *most of them* spread into lakes and swamps.

II. 1661. Of Abyssinia? 1662. How are the highlands mentioned, bordered on the North? What table lands N. of the Sahara? 1663. Describe the table land of Barbary. 1664. How far does it extend on the West? What can you say of its mountains? **T. L.** 1665. What can you say of the lowlands? 1666. How are they at the Cape of Good Hope? On the eastern and western coasts? 1667. On the Red Sea? 1668. In the middle regions of Africa? In the basins of the Senegal and Gambia Rivers? 1669. What is Lower Soudan? How is it divided? 1670. What is known of the western part? What of the eastern? Of its streams?

1671. *The "waterless ocean" of the Sahara* is the most extensive level region of Africa, and the largest desert in the world. *The western part* is a low region of burning sands, moving in waves like the sea; and is so impregnated with salt, that extensive tracts are covered with crystals, glittering like a crust of ice.

1672. In the western part, the *oases* (¶ 299) are rare, and of small extent; and yet it is crossed by caravans, by the aid of the wonderful "ship of the desert," the camel, which carries its own supplies of water, and travels for great distances, and with great rapidity, over these desolate regions, with very little food or drink.

1673. *Towards the centre of the desert*, the land rises to an elevation of 1200 to 1400 feet. *Oases* are more common, as we go towards the East. *In the eastern section*, we find generally a surface of naked rocks; but the oases are so extensive as to form the kingdoms of Fezzan on the North, and of Darfoor and Kordofan on the South, besides others of considerable size on the borders of Egypt.

1674. *The eastern part of Middle Africa* is occupied by the Nile and its narrow but fertile valley, only ten miles broad, and by rocky deserts, which extend on each side of it, to the Sahara and the Red Sea.

1675. *The Nile below Abyssinia descends* over two terraces. *The upper terrace* is crossed by chains of rocks, over which the river flows in numerous rapids and falls, the last of which is at Syene. *This terrace contains* Nubia and Sennaar.

1676. *The lower terrace* of the Nile, on which Egypt is situated, descends gradually, until it spreads into the broad, level delta of Lower Egypt.

I. *Exercises on the Physical Map of South America and Africa.* — *Highlands.* — What highland occupies the greater part of Southern Africa? How far North does it extend, on the eastern and western coasts? What mountains form its borders on the N. and S.? (¶ 1659.) What mountain land on the N.-E.? (¶ 1661.) What mountains are said to border it on the N.? What table land in Western Africa? What table lands in Northern Africa? Which is the largest?

Terraces and Lowlands. — Where do we find the great lowland of Africa, comprising the western part of the Sahara? What name is given to the western part of the desert? The eastern? What to the interior? What are the principal oases of the desert? What river and valley E. of the Libyan Desert?

Rivers and Lakes. — What is the great river of Northern Africa? Are there any others of considerable size? What is the great river of Central Africa? What others on the western coast? What are the source, course, and place of emptying, of each of these rivers? Which of these rivers have deltas? What rivers in Southern Africa, on the W.? What on the E.? What considerable lakes in Africa? (*That which forms one source of the Nile, in Abyssinia, is Lake Tsana, or Dembea.*)

II. 1671. What can you say of the Sahara? Of the western part? 1672. Are there many oases there? 1673. How is the desert towards the centre? On the East? What oases in the eastern part? 1674. How is the eastern part of Middle Africa occupied? 1675. How many terraces in the valley of the Nile? Describe the first. 1676. The lower terrace.

I. PHYSICAL AND POLITICAL DIVISIONS.

Phys. and Pol. M. of Africa. — What considerable table land is there in Northern Africa? What countries occupy it? What countries in the valley of the Nile? What in the western part of the middle region? What countries lie in the central region of Africa, S. of the Sahara? What countries on the southern declivity of the Kong Mountains? What is supposed to be in the middle of Southern Africa? (*See* ¶ 1657.) What countries lie on the western declivity of the great southern table land? What on the southern declivity? On the eastern?

I. EXERCISES ON SITUATION.

Point out on the Political Map of Africa the following oceans, seas, capes, &c., and describe their situation.

Oceans. — Atlantic and Indian.

Seas. — Mediterranean and Red.

Capes. — C. Bon, C. Guardafui, C. of Good Hope, Laguillas, Verd, Gorrientes, Voltas, Frio, Negro, Padroon, Lopez, Formosa, Palmas, Sierra Leone, Blanco, Bojador, Nun, Geer, Spartel.

Gulfs and Bays. — Cabes, Sidra, Delagoa, Algoa, Table, Benin.

Straits. — Gibraltar, Babelmandel, Mozambique Channel.

Rivers. — Nile, Niger, Senegal, Gambia, Quillimancy, Zambeze, Orange, Coanza, Zaire or Congo, Grande.

Mountains. — Atlas, Jibel Kumri or Mts. of the Moon, Samen, Kong, Lupata, Nieuweveld.

Deserts. — Sahara, Libya, Sahel, Karroo.

Lakes. — Tchad, Tsana or Dembea, Zambeze, or Maravi.

Islands. — Socotra, Madagascar, Almirante, Providence, Comoro, Mauritius, Bourbon, Amsterdam, St. Paul's, Tristan d'Acunha, Kerguelen's, St. Helena, Ascension, St. Matthew's, St. Thomas, Prince's, Fernando Po, C. Verd, Canaries, Madeira, Azores.

Relative Situations, or Courses and Bearings. — What is the direction from C. Verd to C. Guardafui? Cairo to the C. of Good Hope? C. Verd to C. of Good Hope? City of Morocco to Cairo? What city in America is in about the same latitude with these two cities? What would be your course in sailing from the C. of Good Hope to St. Helena? St. Helena to the United States? C. of G. Hope to Buenos Ayres? What countries of Europe lie N. of Morocco? Of Algiers? Tunis and Tripoli? What country of Asia lies N. of Egypt? (*See Polit. Map of Asia.*) What E.? What is the direction of the caravan route from Tombuctoo to Morocco? To Algiers? Tripoli? Cairo?

II. NAVIGATION.

1677. We have already seen that Africa has less sea-coast, and fewer advantages *for foreign commerce*, in proportion to its size, than any other division of the world. *Internal commerce* is also much obstructed by its deserts and highlands.

1678. The River Zambeze, and most *of the streams that flow from the great table land* of Southern Africa, are generally too rapid, and have too short a course, to be used for navigation. *The Zaire*, which is the largest, is much obstructed by rocks; and *the Orange River* is often almost dry, for one or two years.

1679. *The Quorra-Joliba, or Niger, spreads, in its upper course*, into a considerable sheet of water, called Lake Dibbie; and is navigable in boats.

II. N. 1677. Has Africa advantages for foreign commerce? For internal commerce? 1678. What can you say of the streams that flow from the southern table land? Of the Zaire? Of the Orange River? 1679. Of the Niger, in its upper course?

The lower course has been navigated by steamers, from the sea to the rapids of Boussa; and *its delta* is crossed by numerous channels, navigable for sea vessels.

1680. *The Senegal and Gambia* flow through a very flat country, and are so shallow, and have so many bars and shoals, that navigation is much obstructed.

1681. *Lake Tchad, and the numerous streams of Eastern Soudan,* afford channels of boat navigation in every direction, on which the products of this country are conveyed to the places of caravan trade, near the desert.

1682. *The Nile* is the most remarkable river of Africa for internal navigation. When the water is high, small *sloops* can navigate it for some distance; but it is chiefly used for *boats,* which ascend 600 miles, to the falls of Syene. *The canal,* which supplies Alexandria with the fresh water of the Nile, is also used for navigation from that city.

II. CLIMATE AND PRODUCTIONS.

1683. *Africa lies* chiefly in the Torrid Zone. Its dry, sandy plains and deserts give its lowlands a burning *heat* which is not common in other parts of this zone. It is rich in all *the productions* of the Equatorial Region, and its inhabitants obtain their food with very little labor.

1684. *In Barbary, Egypt, and South Africa, the climate* is more temperate, and we find *grain,* and the *products* of the Hot and Warm Regions.

1685. *Africa is remarkable for forests* of the peculiar kind of acacia-tree which yields gum Arabic; and of the palm-tree, which yields the date, the palm wine, and the palm oil. One of its trees — *the baobab* — is said to be the largest in the world, and to live several thousand years.

1686. *The eastern coast of Africa produces* many of the rich perfumes, gums, and spices, which are usually called Arabian. *The ivory* of the elephant, and the beautiful *feathers* of the ostrich, are also valuable products.

1687. *The rivers of Africa,* which are of so little use in commerce, *abound in* sands containing grains of gold, which are washed out by the natives; and *gold dust* is one of the most important articles of commerce.

Chart of Climates. — Look at the Chart of Climates, and mention in what regions the greater part of Africa lies. What are the chief productions of the Equatorial Region? Into what regions does it extend North and South? What are their productions? Mention the animals you find on the chart.

III. INHABITANTS.

1688. Africa is inhabited chiefly by the natives of the Negro race. But *in Abyssinia, and the countries of Northern Africa,* the people are generally of the European race; and many of *the tribes* resemble the Arabs.

1689. *Africa contains several colonies of Europeans;* and in these Christianity and civilization are found, but not in the best state. *The Portuguese* have long had colonies in Southern Guinea, and on the eastern coast of Africa. The *colony of the Cape of Good Hope* is inhabited by the Dutch and English; *Algiers* has been lately colonized by the French; and *all these nations, and the Danes,* possess small colonies for trade, on the coast of

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II. Of the lower course? 1680. Of the Senegal and Gambia Rivers? 1681. Of Lake Tchad, and the streams of Eastern Soudan? 1682. Of the Nile? What navigable canal is there from this river? 1683. In what zone does Africa lie? What can you say of the climate, and of its lowlands? 1684. What of the northern and southern parts? Do these parts lie in the Torrid Zone? (*See Map.*) 1685. For what forests is Africa remarkable? What can you say of the baobab? 1686. What valuable products on the eastern coast? What from animals? 1687. What from the sands of the rivers?

III. I. 1688. By what race of men is Africa inhabited? 1689. What is the state of the European colonies? What are the most important colonies?

Western Africa. The Abyssinians are *the only native Christian nation* in Africa; and their religion is corrupted, and their customs barbarous.

1690. *The nations* of Northern Africa, and several tribes on the eastern coast, and in Western and Central Africa, are *Mahometans*, and among the lowest of the *half-civilized* nations, but superior to any others in Africa

1691. *Most of the inhabitants of Africa* profess that kind of Pagan *religion* which is called Fetichism, and often worship sticks, stones, and pieces of paper. They are either *barbarous or savage*, and cruel in their customs.

1692. *The commerce of Africa is carried on* chiefly by land, in consequence of the scarcity of *harbors and streams*, and the nature of the country. *The principal trade is in* gold dust, ivory, gums, and especially in slaves, who are stolen from the weaker tribes, and sold to Europeans on the coast. This want of commerce, and the wars made for the slave trade, hinder *the progress of civilization.*

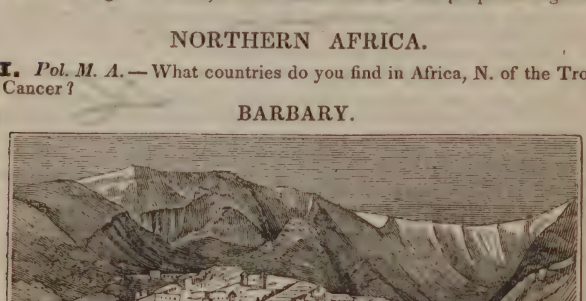
1693. *Knowledge, arts, and manufactures*, are generally in a low state; and almost the only *book* known in the half-civilized nations is the Koran, or sacred book of Mahomet. In some countries, there are *schools* where the children are taught to read it.

1694. In Egypt alone, *schools of science* have been established for those in the service of government; but the instruction of the people is neglected.

NORTHERN AFRICA.

I. *Pol. M. A.* — What countries do you find in Africa, N. of the Tropic of Cancer?

BARBARY.



(179) *Constantina.*

I. 1695. BARBARY is a rugged mountain and table land, a part of which is represented in the view of Constantina, a

II. What can you say of the people of Abyssinia? 1690. What nations of Africa are Mahometans? What is their state of civilization? 1691. What are the religion and civilization of other nations of Africa? 1692. What can you say of their commerce? What effect has this on civilization? 1693. What is the state of knowledge, arts, and manufactures? 1694. In what country of Africa are there schools of science?

city of Algiers. *It contains* Morocco, Algiers, Tunis, and Tripoli, usually called the Barbary States.

I. *Pol. M. A.* — Where is Barbary? What is it? How is it bounded? What state of Barbary is most western? Which is the most eastern? Which appears to be the largest? What is the capital of each state?

II. 1696. The table land of Barbary is bordered on the West by the High Atlas; and *its western declivity forms* the empire of Morocco. *The southern declivity* is a fertile region of date-palms, called Biled-ul-gerid, or "the land of dates."

1697. *Barbary is watered* by numerous streams. *Its soil* produces abundant and valuable crops, when it is well cultivated; and *the pastures* in the highlands are rich. *The climate* is hot in the lowlands, and temperate in the highlands, yielding some of the most valuable *products* of the Hot and Warm Regions.

II. *Physical Map of South America, Africa, and the Atlantic Ocean.* — What countries of Europe lie N. of the table land of Barbary? What are its most northern capes? What mountains surround it? Do you find room for any large rivers, like the Nile or the Rhine? — *Pol. Map.* — Where is Biled-ul-gerid? What desert lies S. of Barbary? What oasis and kingdom connected with Barbary lie on the S.-E.?

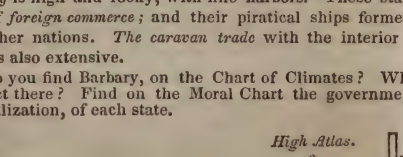
III. 1698. *The people of Barbary* are a mixture of a small number of Turks, with Moors, Jews, and Negroes, (formerly slaves,) who inhabit the towns, and of Berbers and Arabs, who live in the mountains in villages and tents. All, except the Negroes, are of the European *race, and are governed* by the Turks.

1699. *The religion* is Mahometan. *The people* are extremely ignorant and corrupt. *The government* is despotic; *and the wandering tribes* often rob the villages. *Industry* is thus discouraged; *agriculture* is neglected; and *manufactures*, though valuable, are not extensive.

1700. *The coast of Barbary* is high and rocky, with fine harbors. These states once had a large share of *foreign commerce*; and their piratical ships formerly plundered those of all other nations. *The caravan trade* with the interior of Africa, across the desert, is also extensive.

III. In what region do you find Barbary, on the Chart of Climates? What productions may we expect there? Find on the Moral Chart the government, religion, and degree of civilization, of each state.

1701. The Empire of Morocco *comprises* the kingdoms of Morocco, Tafilet, and Fez, lying on the western declivity of the Atlas Mountains, as in the profile. *The soil* is generally fertile, and *the products* are valuable. But *the government* is oppressive, and industry is discouraged.



(180) *Profile of Morocco.*

III. How is Morocco bounded? What is the capital? How does its surface rise on this section, from the W., on the left hand, to the E., on the right? Is the capital on high or low ground? Where is the Spanish fortress of Ceuta? What seaport has Morocco on the Straits of Gibraltar? What seaports on the Atlantic? What cities in the interior? What islands of the Atlantic are nearest Morocco?

1702. Algiers is one of the largest, and was formerly one of the most powerful of the Barbary States. It has been conquered, and its cities partly colonized, by the *French*; but the greater part is still occupied by the *wandering tribes*.

III. How is Algiers bounded? Where is the capital? What other seaport has it? What towns in the interior?

1703. Tunis is the smallest, but the best cultivated and most populous of the Barbary States. *Its government* is more just, and *manufactures and commerce* are in a better condition than in the surrounding states.

III. How is Tunis bounded? Is it as large a state as Algiers or Morocco? Where is the capital? What gulf on the East? What large islands are nearest to it?

1704. Tripoli has a government and people more disposed to improvement than any other state in Barbary. *The soil* is fertile on the coast, but barren in the interior. It has a great deal of *commerce* with the interior and with foreign countries.

1705. Barca is a small but rich table land, *once* celebrated for its productions, but *now inhabited* by wandering herdsmen, subject to Tripoli.

1706. Fezzan and Gadames are oases in the deserts South of Tripoli, which are important only as halting-places and markets for the caravans.

III. How is Tripoli bounded? In what part of it is Barca? Where is the capital? What other towns are there? Which way from Tripoli is Fezzan? What is its capital? Where is Gadames?

EGYPT.

(131) *Cairo and the Pyramids.*

I. 1707. *Egypt* has been a celebrated country from ancient times; and its pyramids and ruined temples are some of the most wonderful works of man.

I. *Pol. M. S. A. and Af.* — How is Egypt bounded? On what river does it lie? What is the capital?

II. 1708. *Egypt lies* on the lower terrace and delta of the Nile. *Its soil* is formed and enriched by the mud left in its annual floods and it is one of the most fertile countries in the world.

1709. *The climate* is hot in summer, but delightful in winter. *Rain* is very rare; and *Egypt is watered* chiefly by the Nile, and its canals and floods, (*see* ¶ 414 *and* 417.) *It produces* wheat and flax, as well as the plants of the Hot Regions.

III. 1710. *Agriculture* is well conducted. *Manufactures* are in a low state; but its *trade* is important. Nubia and Sennaar are subject to Egypt.

III. Has the Nile one or many mouths? What seaports lie nearest the principal mouths of the Nile? What large seaport in the north-western part of Egypt? How wide is the valley of the Nile? (*See* ¶ 1674.) What is the country on each side of it? Where are most of the towns? Where is Siout? What places above Siout? What port at the head of the Red Sea? What other port on this sea?

MIDDLE REGIONS OF AFRICA.

I. *Pol. M. Af.*—What countries lie in the middle regions of Africa, between the Tropic of Cancer and the southern table land, or the mountains called Jibel Kumri? Which are in the eastern part? What general name is given to the western coast? What to Central Africa?

NUBIA.

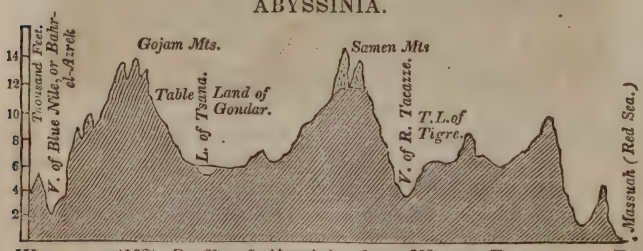
I. 1711. *The general name of Nubia is now given* to the whole region extending from Egypt to Abyssinia, of which Nubia and Sennaar are the principal divisions. It abounds in *deserts*, and *the sands* are often raised by the wind in clouds and pillars, which move with great swiftness, and sometimes bury travellers.

I. *Pol. M. Af.*—How is Nubia bounded? Sennaar? What are the chief towns?

II. 1712. *The soil of Nubia* is fertile only in the valley of the Nile. *The climate* is intensely hot; and *the products* are those of the Warm and Hot Regions. *The people* are barbarous and ferocious, *divided* into many tribes and small nations, all of which are now subject to Egypt.

III. What towns of Nubia and Sennaar lie on the Nile? What port on the Red Sea? (*lat.* 19°.) (*Through this port, many go on their pilgrimage to Mecca.*)

ABYSSINIA.



W. (182) *Profile of Abyssinia, from West to East.* E.

I. 1713. *Abyssinia* is a rugged mountain land, crossed by two ranges of mountains, whose peaks are covered with

perpetual snow. They enclose the *table land* of Gondar, with the capital, and the *Lake* Tsana or Dembea.

I. *Pol. M. Af.*—How is Abyssinia bounded? What is its capital? What is its surface, and what mountains cross it? (¶ 1713, *and profile.*)

II. *Exercises on the profile.*—How is Abyssinia situated? How do you ascend and descend, and over what countries do you pass, in crossing Abyssinia from East to West, or from right to left on the profile?

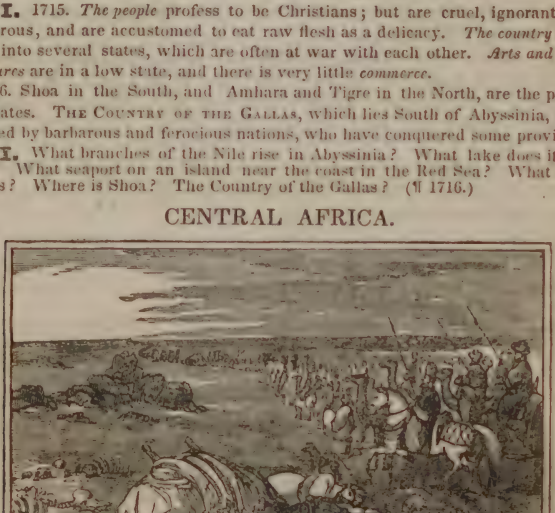
II. 1714. *The surface of Abyssinia* is rough, but the *valleys* are fertile. *The climate* is intensely hot in the sandy lowlands on the coast, but temperate or cold in the highlands.

III. 1715. *The people* profess to be Christians; but are cruel, ignorant, and barbarous, and are accustomed to eat raw flesh as a delicacy. *The country is divided* into several states, which are often at war with each other. *Arts and manufactures* are in a low state, and there is very little *commerce*.

1716. Shoa in the South, and Amhara and Tigre in the North, are the principal states. The Country of the Gallas, which lies South of Abyssinia, is inhabited by barbarous and ferocious nations, who have conquered some provinces.

III. What branches of the Nile rise in Abyssinia? What lake does it contain? What seaport on an island near the coast in the Red Sea? What other towns? Where is Shoa? The Country of the Gallas? (¶ 1716.)

CENTRAL AFRICA.



(133) *Caravan in the Desert of Sahara.*

I. 1717. *The most remarkable object in Central Africa* is the Great Desert of Sahara. A number of *oases* are scattered through it, inhabited or frequented by wandering tribes of Bedouin robbers, who often attack the caravans of merchants which cross it. Travellers sometimes perish, with their camels, for want of water or provisions.

I. *Pol. M. Af.*—How is the Sahara bounded? What can you say of it? (¶ 1717.) What are the principal oases in the eastern part? What in

tne centre? What in the western part? What places are connected by the paths of caravans?

SOUDAN.

I. 1718. That part of Central Africa which lies South of the desert, between Nubia and Senegambia, is called *Soudan*, or the "black country." *It is divided* into numerous petty kingdoms, *governed* by despots, who consider themselves the greatest of monarchs, and oblige all who come near them to fall on their faces.

I. *Pol. M. Af.*— Where does Soudan lie? How is it bounded? (*On the West by Senegambia.*)

II. 1719. *Soudan is surrounded* by deserts and highlands, except on the West, and does not *reach the ocean* in any part. It is therefore very little *known;* but it *appears to be* a region of elevated terraces, which are well watered and fertile, especially around Lake Tchad.

1720. *Its climate* is very hot, and unhealthy to strangers. *It produces* all the plants of the Equatorial Region, and *exports* gums, gold, ivory, and slaves, to Northern Africa.

III. 1721. *The people* are chiefly Mahometans, and are less barbarous than those who trade principally in slaves, on the coast. They have many large *cities*, and understand some of the *arts* very well. We know little of *most states of Soudan*, except their names.

III. What states do you find in the eastern part of Soudan? What states are there around Lake Tchad? What on the Niger? What are the principal towns on the Niger? What towns in the central part of Soudan? In the eastern part?

WEST AFRICA.

(184) *Slave-Catching in Africa.*

I. 1722. The western part of the Middle Regions of Africa, extending from the Sahara to the Atlantic Ocean

and the Gulf of Guinea, is usually called *West Africa. It is most remarkable for* the cruel trade in slaves, who are stolen from their homes, and marched to the coast in files, or coffles, fastened to each other, to be sold to white men.

I. *Pol. M. Af.* — How is West Africa bounded? (¶ 1722.) What is remarkable here? What country do you find in the northern part? What country on the Gulf of Guinea?

SENEGAMBIA.

I. 1723. *Senegambia* is a fertile lowland plain, forming the basin of the Senegal and Gambia Rivers. *Its streams* scarcely flow, on account of the flatness of the surface; and spread into unhealthy lakes and swamps.

I. *Pol. M. Af.* — How is Senegambia bounded? What streams has it? (¶ 1723.) What towns do you find?

II. 1724. *The climate* is intensely hot; and Senegambia is rich in the *plants* of the Equatorial Region. It has *forests* of trees producing the most valuable gums, such as copal, guaiacum, and gum Arabic.

III. 1725. *It is inhabited* chiefly by the Jaloff, Foulah, Felloop, and Mandingo tribes, who live in towns, and are somewhat acquainted with *arts* and *manufactures*. There are many small *states*, little known to us.

NORTHERN OR UPPER GUINEA.

I. 1726. *Northern Guinea embraces* the country north of the Gulf of Guinea, from the valley of the Niger to the Atlantic. *It is traversed by* the Kong Mountains, and lies in part on their southern declivity.

I. *Pol. M. Af.* — Where is Northern Guinea? How is it bounded? What mountains has it? (¶ 1726.)

II. 1727. *The coast has been divided*, according to its most important exports, into the Grain Coast, which received its name from grains or seeds resembling pepper, formerly exported; the Ivory Coast; the Gold Coast; and the Slave Coast.

1728. *Northern Guinea* is a fertile region. It embraces the delta of the Niger on the East, and has a valuable *commerce*.

II. What are the divisions of the coast of Northern Guinea? Describe the situation of each. What mountains pass through it? What river on the coast?

III. 1729. *The interior is divided* into a number of kingdoms, of which Ashantee, Dahomey, and Benin, are the most powerful. The *fort* of Elmina *is occupied by the Dutch*, that of Cape Coast Castle *by the British*, and that of Christiansborg *by the Danes*; and each nation has other smaller forts and settlements, for the purpose of carrying on trade.

III. What kingdoms does Northern Guinea contain? What are the capitals and principal towns? What forts and settlements of Europeans on the coast? (¶ 1729.)

FOREIGN COLONIES.

III. 1730. *The French* have colonies at St. Louis and Goree, and the French, British, Dutch, and Danes, have forts on the coast of Guinea, merely for trading.

1731. *The British* have established a colony at *Sierra Leone*, for Africans taken from slave ships, who are set at liberty. Several thousands are now collected here, in flourishing villages, with schools and churches

1732. LIBERIA is a colony between Senegambia and Guinea, formed by free colored persons from the United States, aided by American Colonization Societies. It extends about 300 miles, from Cape Palmas to Cape Mount.

1733. *It is* increasing in population, and embraces a number of flourishing towns and villages. *Laws* and *government*, schools and churches, are established; and *the inhabitants* are industrious and successful in agriculture and trade.

III. What towns and settlements are there in Senegambia? What native states and tribes do you find? What American colony on the southern border? What towns and settlements do you find there?

SOUTHERN REGIONS OF AFRICA.

(185) *Animals of Southern Africa.*

I. 1734. *The Southern Regions of Africa embrace* the southern table land in the centre; South Africa, lying South of the Tropic of Capricorn; the Eastern Coast; and the Western Coast, which is called South Guinea.

1735. *The lowlands and terraces* that have been explored *on the eastern and western coasts*, have a fertile soil, and a hot climate, which produce the richest vegetation. They have also thick *forests*, abounding with beautiful as well as ferocious animals.

SOUTHERN OR LOWER GUINEA.

I. 1736. The Western Coast of Africa, from the valley of the Niger to South Africa, is called *Southern or Lower Guinea.* It is controlled chiefly by the Portuguese, who conceal their knowledge of the country from other nations.

I. *Pol. M. Af.*—How is Southern Guinea bounded? What are its chief towns?

II. 1737. *Southern Guinea lies* on the terraces of the great table land, and has every variety of surface. *The soil* appears to be generally very fertile.

1738. *The lowland of the coast* is very hot, and unhealthy for strangers; *the terraces* have a milder climate; but *all abound in* the richest plants of the Equatorial Region. *Rain* is uncommon; but dews are abundant.

III. 1739. *The people* are kept in barbarism by the slave trade; and they mingle the Roman Catholic religion with their own Paganism.

1740. Like other parts of Africa, *Southern Guinea is divided* into numerous small states, of which Loango, Congo, Angola, and Benguela are the principal; but *the Portuguese claim* possession of the greater part of the coast.

III. What native states in Southern Guinea? In what order do they lie, beginning at the North? What are the principal towns?

EASTERN COAST OF AFRICA.

(186) *Lion Hunting.*

I. 1741. *The Eastern Coast of Africa* is little known. It is governed by the Portuguese, South of Cape Delgado, and by the Arabian sultan of Muscat, North of this cape. Here, as in most parts of Africa, *lions* are so numerous as to be the dread of man, and are often hunted.

I. *Pol. M. of Af.* — On what ocean does the eastern coast of Africa lie? What can you say of it? (¶ 1741.) Who govern it? What animals are numerous? What states and towns do you find?

II. 1742. The Eastern Coast of Africa is unhealthy on the *lowlands*, and often sandy and barren. *It rises* in terraces, and varies exceedingly in its *surface, soil, and climate.* It has the most valuable *productions* of the Equatorial Region.

II. What large island is near the eastern coast of Africa? What channel separates them? What rivers do you find on this coast? What lakes? What mountains in the interior?

III. 1743. *The people* appear to be of the Arab or Malay race, but are generally in a state of barbarism. They have considerable *commerce* with the Portuguese, and with the Arabians.

1744. *This coast is divided* into a number of petty kingdoms, of which we know little, except the names. *The Imam or Sultan of Muscat*, who has possessions here, is the most powerful *prince*, and has a considerable navy.

III. What kingdoms and states do you find on the Eastern Coast of Africa? What are the principal towns? What small islands near the coast?

SOUTH AFRICA.

(187) *Hottentot Villages.*

I. 1745. *The Hottentots of South Africa live* in huts built of twigs and mud, which are generally arranged in a circle. *They use oxen* for riding, as well as for draft.

I. *Pol. M. Af.* — How is South Africa bounded? (*See* ¶ 1734.) What countries does it contain? What can you say of the Hottentots?

II. 1746. *South Africa occupies* the southern extremity of Africa, and the terraces of the great table land. *The lowlands* are generally well watered and fertile on the South and East; but *the terraces* are generally dry.

1747. *The climate* is mild, but variable, and *produces* the plants of the Hot and Warm Regions, but is so liable to drought, that *the inhabitants subsist* more by pasturage than agriculture.

III. 1748. *The Hottentots of South Africa, and especially the Bushmen*, (Bosjesmen, or wild Hottentots,) are among the most ignorant and savage tribes known. *The Caffres*, on the eastern coast, appear like Arabs in their form, and are brave, intelligent, and far less barbarous. *The Boshuanas*, North of the Caffres, are a settled people, and have a number of large towns and villages.

1749. *Christian missionaries* have been sent to these tribes, and have succeeded in leading some of them to Christianity and civilization.

III. Where is Caffraria? Where is the country of the Boshuanas? (¶ 1748.) Of the Hottentots? What towns are known to us? What colony at the South?

COLONY OF THE CAPE.

I. 1750. *The Colony of the Cape is possessed* by the British, and inhabited by the Dutch and British, and the Hottentots, who were formerly slaves. *It is remarkable* for the Table Mountain, a flat-topped mountain, near Cape Town, the capital of the colony.

II. 1751. This colony has a great deal of fertile *land, chiefly occupied* as pasturage, but furnishing other *productions* of the Warm Regions. Most of *the inhabitants reside* on the lowland, a fertile plain covered with grass and trees.

II. Where is the Colony of the Cape? How is it bounded? What mountains in it? What rivers? What bays? What is the capital, and where? What other places do you find?

AFRICAN ISLANDS.

I. 1752. *Africa is encircled* by a number of islands, of which Madagascar is the largest. The rest are generally small, and volcanic in their character. In 1811, a volcano broke out in the sea, near the Azores, and formed a new island, which afterwards disappeared.

I. *Pol. M. Af.* — What islands are there E. of Africa? What groups of islands N-W. of Africa?

ISLANDS EAST OF AFRICA.

II. 1753. MADAGASCAR is one of the largest islands in the world, about equal to France in *extent*. It is traversed by lofty *mountains*, containing valuable *mines*.

1754. *The coasts are bordered* by fertile, well-watered *valleys* and *plains*, with all *the products* of the Equatorial Regions; and the inhabitants are Malays, or Arabs partly civilized. *The interior* is rugged and mountainous, and *the inhabitants* are savage.

III. 1755. *Madagascar is divided* into numerous states, many of which have been united in one empire. A late king introduced *schools and Christianity*; but the present queen persecutes all Christians and their institutions

III. In what zone is Madagascar? What are its capes? What towns do you find? What small islands lie East of Madagascar? What two groups North and North-East? What island near Cape Guardafui?

1756. Bourbon and Mauritius are mountainous islands, but contain much fertile land, and furnish valuable *productions.*

Bourbon belongs to the French, and contains a volcano which burns continually. *Mauritius belongs to* the British, but is also called the Isle of France. *Socotra* is remarkable for its aloes.

ISLANDS SOUTH OF AFRICA.

II. 1757. Amsterdam and St. Paul's Island are resorted to for the seal fishery, and the barren rocks of Tristan d'Acunha for fresh water. Kerguelen's Land is sometimes called the Island of Desolation.

II. *M. of World.* — What is the direction of each of these islands from Africa?

ISLANDS WEST OF AFRICA.

II. 1758. *The islands West of Africa* enjoy a pleasant climate, though they are situated in hot regions. They are almost all volcanic in their character.

1759. The Azores, Madeiras, and Canaries, are fertile, and export wine and fruit in abundance. The Cape Verd Islands are more barren, and only produce cotton, and export salt, which is formed by the heat of the sun in the lagoons of sea water. They are most *remarkable* for the lofty Peak of Teneriffe.

III. 1760. *The Canaries belong to* Spain, and *the other islands mentioned belong* to Portugal, together with the rocky islands of St. Matthew's and Ascension, S. of Cape Verd. Angra, Santa Cruz, and Porto Praya, are the *principal towns.*

1761. St. Helena is a lofty rock, accessible only by one chasm, on which Jamestown, the capital, is built. *It was celebrated* as the prison of Napoleon, but *is best known* as a place of refreshment for ships.

III. *Pol. M. Af.* — What are the principal islands of the Azores? What country in Europe is nearest to them? What are the chief islands of the Madeiras? The Canaries? The Cape Verd Islands? What countries of Africa are nearest to them? Which are nearest to America? (*See Map of the Atlantic Ocean.*) Where does St. Helena lie?

III. CITIES OF AFRICA.

1762. A large part of Africa is in a state of barbarism, and therefore contains few *large cities,* or even considerable towns, in comparison with Europe and Asia. These are chiefly in North Africa; and most of them are greatly inferior to the chief cities of Europe and Asia in commerce, manufactures, and wealth, as well as in population.

1763. They are built like those of Asia, (p. 318,) and are inferior to the poorest in Europe in their *appearance,* on account of the narrowness, irregularity, and filthiness of *the streets.* Even in Cairo and Fez, the streets are often so narrow, that two camels cannot go abreast.

1764. *Cairo* exceeds any other city of Africa in magnitude and splendor. Its mosques and tombs are neat, and often elegant; but its general appearance is miserable. It is resorted to for trade by merchants from the whole of Western Asia, and the interior of Africa. *Alexandria* is the chief place of trade between Europe and Egypt. It is a city of considerable extent, and now quite flourishing.

1765. *The cities on the coast of Barbary* are built, like many others on the Mediterranean, on declivities rising from the water. Most of them are fortified, and are places of some trade. They have more resemblance to those of Europe than any others in Africa. *Tripoli* has broad, straight streets, and is superior to most cities of Barbary in beauty. *Tunis* is situated on a salt lake connected with the sea, a few miles from the ruins of ancient Carthage.

1766. *Algiers* was formerly noted as a nest of pirates, and has been the place of slavery of many Americans. It is now possessed by the French. *Constantina* is an ancient and large city, remarkable for its situation on the top of a high rock, which is only accessible by a bridge.

1767. *Morocco* has lost much of its former importance. It is about twelve miles from the foot of Mount Atlas, on a fertile plain, in the midst of a forest of palm-trees. *Fez* is the chief resort of the Arabs of the desert for trade. *Tangier* and *Mogadore* are places of some trade.

1768. In the MIDDLE REGIONS OF AFRICA, the towns and cities usually consist of low, mud-walled huts, with conical roofs, thatched with leaves or straw. They are spread over a great extent of ground, and rather resemble a camp than a city. They are often surrounded with a low wall, which is also built of earth or mud. The palace of the king is usually only a collection of huts surrounded by a wall.

1769. *Sego*, the capital of the kingdom of Bambarra, is a city of considerable size. Its mosques are numerous.

1770. During the late discoveries in Africa, a number of large cities were found on the Niger, surrounded by mud walls, and containing from 10,000 to 30,000 inhabitants. The principal in the interior are *Tombuctoo*, the centre of trade between Bombay and Soudan; *Angornou*, the largest city of Bornou; *Kano*, the chief commercial city of Soudan; and *Sackatoo*, the capital of the warlike nation of the Fellatahs.

1771. The most important cities on the Niger, between Tombuctoo and the Gulf of Guinea, are *Yaouri*, *Boossa*, *Funda*, and *Eboe*. *Yaouri* is from 20 to 30 miles round, with high walls, and entered by eight gates. The houses are of clay, two stories high.

1772. *Cobbe* is the principal town of Darfoor, and a place of extensive commerce, chiefly inhabited by merchants. *Gondar*, the capital of Abyssinia, is situated on a hill, surrounded by a deep valley. Like other towns of Abyssinia, it has several Christian churches.

1773. *Melinda* is a large, handsome town. Its houses are built of stone, and many of them are magnificent. *St. Salvador*, the capital of Congo, has a number of Roman Catholic churches, and many Portuguese inhabitants. The towns of *Northern Guinea* are not well known. *Coomassie*, the capital of Ashantee, is said to be regularly built, with neat cane huts.

1774. In SOUTH AFRICA, the kraals or villages of the natives are usually composed of huts formed of twigs or branches of trees, plastered with clay, and placed in a circle, around an enclosure which contains their cattle. There are a number of villages of natives, collected around the missionary stations of South Africa. Some of them present a handsome appearance, and have many of the improvements of civilized life. *Latakoo*, or *Litakoo*, is the largest native town yet known in South Africa.

1775. *Tananarivo* is a large, well-built, inland town of Madagascar, and the capital of one of its principal kingdoms.

1776. *European Settlements.* — The French, Portuguese, and Spanish have a number of settlements on the coast of Africa for the purpose of trade, especially in slaves. *Mozambique* is the capital of the Portuguese settlements on the coast of Zanguebar, and *Loanda* on the coast of Angola. The chief French settlements are at *Goree* and *Algiers*.

1777. These settlements are usually mere forts. The European towns

of Africa and its islands are built like those of Europe. *Elmina* is the chief settlement of the Dutch on the coast of Guinea, and *Cape Coast Castle* of the English.

1778. *Cape Town* is the only considerable town in the Colony of the Cape. It is important chiefly as a place of refreshment for ships, on East India voyages. Two thirds of the inhabitants are colored persons.

1779. The towns in the colony of Sierra Leone, of which *Freetown* is the principal, are pleasant and neatly built. Most of the inhabitants are Africans of various nations, taken from slave ships, and brought here to be instructed in religion and the arts of civilized life. *Monrovia*, the capital of the American colony of *Liberia*, is a flourishing town, situated on Cape Mesurado.

TRAVELS ON THE MAP OF AFRICA.

1780. Begin at Suez on the Red Sea, and travel around the coast of Africa, to Morocco, mentioning the principal kingdoms and cities you pass, and what you know of them.

Next sail along the coast of the Mediterranean to Egypt; go up the Nile to Abyssinia, and through Soudan, and across the Sahara, to Barbary; and give an account of what you find on the way.

Now travel over Africa on the Moral Chart; mention the government, religion, and state of civilization, of each country; and see if you can find a Christian and civilized nation.

OCEANICA.

I. 1781. OCEANICA *comprises* the islands which lie South-East and East from Asia, and *is divided into* Malaysia, or the Indian Archipelago, Australia, and Polynesia. The number of these islands is almost countless; and their size, form, and character, are very various.

I. *Map of Oceanica.* — What does Oceanica comprise? What divisions do you find on the map? Which two are the most western? Where are the islands of Polynesia? What are some of the largest islands in Malaysia? In Australia? Are there any large islands in Polynesia?

II. 1782. *The islands of Oceanica vary in size*, from New Holland, which is sometimes called a continent, to the rocks inhabited only by sea birds. *The large islands* contain high mountains, considerable streams, and every variety of surface. *Of the small islands*, many are single mountains, rising above the sea; and others are only low beds of coral rock, covered with a thin soil.

1783. *Many islands of Oceanica* are volcanic; and *the range of volcanoes* which begins in Kamschatka and Japan, is continued, through the Philippine and other islands of Malaysia, to the Moluca Islands. From the Moluccas, *one branch passes North-West* through Java and Sumatra; and *another branch extends South-East* through New Guinea, and the small Australian islands, to New Zealand.

1784. *The southern portion of Australia extends* into the Tem-

perate Zone. But *the greater part of Oceanica lies* in the Torrid Zone, and has *the climate* of the Equatorial Region, rendered milder by the ocean around.

1785. *The plants and animals of Malaysia* resemble those of Southern Asia. *In Polynesia* the bread-fruit, the yam, and the taro root, are cultivated for food instead of rice; and the only *animals* are the dog and the hog. *The plants and animals of Australia* are unlike those of any other part of the world.

III. 1786. *The people of Oceanica* are generally of the Malay race, and their languages are very similar. *They are* intelligent and active in their dispositions, but in different states of *civilization*, and varying in their *character*, from unusual mildness to great cruelty.

1787. *The Papuans of Australia* resemble the African race in some respects, and the Malay race in others; but in regard to civilization, they are among the most degraded and savage of mankind.

MALAYSIA.

(188) *Animals of Malaysia.*

I. 1788. *Malaysia* has the large and fierce animals of the Torrid Zone, such as the rhinoceros, the crocodile, the boa serpent, and the tiger; and it is only in some of these islands that the orang-outang is found.

II. 1789. *The islands of Malaysia generally consist of* table lands or mountains in the interior, often containing volcanoes, and of level, fertile lowlands on the coast. *Their climate* is that of the Equatorial Region, rendered milder by the sea around them; and *their productions* embrace the most valuable plants of this region, especially the finest spices.

1790. These islands also contain valuable *mines* of gold, copper,

tin, and other metals, and of diamonds and precious stones, which furnish important *exports*.

II. *Pol. M. Asia.* — What are the most northern islands of Malaysia? Which is the largest of the Philippine Islands? What two large islands lie South of these? What small islands E. of Celebes, usually called the Moluccas or Spice Islands? Which way from Borneo are the Sunda Isles, Sumatra, and Java? What small islands near them? What small islands E. of Java? Which is the largest island in Malaysia? Which is the most western?

III. 1791. *The people of Malaysia* are generally of the Malay race. *Those who are settled in towns* on the coast are intelligent, and skilful in many arts and manufactures, and extensively engaged in commerce. *The tribes of the interior* are little known, and many of them are savage.

1792. Most of these islands have *European settlements*, nearly all occupied by the Dutch, who claim possession of the principal islands.

1793. Borneo is the largest island in the world except New Holland. It is *watered and fertilized* by numerous streams from the mountains in the interior. *It is remarkable for* its mines of gold and diamonds, for the orang-outang, which so much resembles man, and, it is said, for the absence of all beasts of prey.

1794. Celebes is remarkable for being divided into peninsulas; which brings all its inhabitants within the reach of commerce and partial civilization.

1795. Sumatra is the largest island of Malaysia except Borneo; and *the products* of its soil and mines are very valuable.

1796. Java is the fourth of these islands in size, and contains the largest European colony, at Batavia. The Dutch control the greater part of the island. They also possess the Moluccas, or Spice Islands, and derive great wealth from them.

1797. *The Manillas, or Philippine Islands*, belong to Spain. *Their productions, exports, and commerce*, are of great value.

AUSTRALIA.

(139) *Animals of Australia.*

I. 1798. *Australia consists* of the principal island or main land of Australia, generally called New Holland, and

of the islands around it. *The native inhabitants* are chiefly Papuans, (¶ 1787,) and are the most savage people known, *living* in huts of bark, which sometimes float on the water, or even sleeping on trees. *Some tribes* are even without clothes, boats, or implements for hunting or fishing, and feed on fruits, insects, worms, or shell-fish from the shore.

I. *M. of O.* — In what direction from Asia is Australia? Which is the largest island, or main land of Australia? What large islands North of it? What one South? What large islands South-East of it? What groups of islands North-East of it?

NORTH AUSTRALIAN ISLANDS.

II. 1799. *Papua or New Guinea, New Britain,* and other islands North and North-East of Australia, are *inhabited* by ferocious Papuans, and they have never been explored.

1800. *All these islands lie* within the Torrid Zone, and have its *climate* and *productions. New Guinea is remarkable for* the beautiful bird of paradise, whose feathers are exported.

NEW HOLLAND.

I. 1801. *New Holland, or Australia Proper,* is the largest island in the world, nearly equal to Europe in extent, but very thinly inhabited. *It lies* on the opposite side of the world from the United States. *It has day* when we have night, and *summer* when we have winter. *Its plants and animals* are unlike those of all other parts of the globe. *Some of its quadrupeds* go upon two feet, and *others have* the bill of a bird. *Its swans* are black, and *some of its fruits* have the stone on the outside.

I. *M. of O.* — How is New Holland bounded? What are the chief divisions? What towns do you find? What is remarkable here?

II. 1802. A range of *highlands* runs along the eastern coast, called the Blue Mountains, which terminates, in the South, in the White Mountains, covered with perpetual snow. *The declivity towards the sea* is short and steep; and *the rivers* do not admit of much navigation.

1803. These highlands descend by terraces *towards the interior,* which *appears to be* a vast region of steppes. *The land in the interior* has so little descent, that *the rivers* stagnate in separate swamps or lakes, during the dry season, and leave the rest of the country a desert.

1804. *The soil* of New Holland is in many parts fertile; and it has *the climate* and *productions* of all the regions from the Equatorial to the Temperate; but the whole country suffers from the want of water.

1805. *In the southern* parts the temperature is mild, and the plants of Europe flourish; but *all parts are subject* to excessive drought, which often destroys the harvests; and *the farmers* subsist *chiefly* by pasturage.

II. What mountains do you find in New Holland? Where are they? What rivers? Which way do they flow? What gulfs and bays around New Holland? Has it any peninsulas?

III. 1806. *New Holland was first settled* by criminals sent from Great Britain to Botany Bay, but *is now colonized* by respectable British emigrants, who have formed settlements on all the coasts. *Arts and manufactures* are beginning to flourish; and the *commerce* of New Holland is considerable.

III. Between what latitudes does New Holland lie? In what zones? What circle crosses it? What plants may be expected to grow there? What divisions do you find, and how situated? Which is the most northern colony?

VAN DIEMEN'S LAND.

I. 1807. *Van Diemen's Land* is a large and mountainous island, abounding in lakes, streams, and excellent harbors. Its *soil* is generally fertile. Its *climate* is more temperate and healthy than that of New Holland. Its *productions* are like those of the Northern United States.

I. *M. of O.* — Where is Van Diemen's Land? What strait separates it from New Holland? What towns do you find on it? Describe it. (¶ 1807.)

III. 1808. *The natives* are more savage than those of New Holland. The *white population* is respectable and improving. *Agriculture* is well conducted, and *the towns* and *villages* are thriving.

1809. NEW ZEALAND enjoys a fine temperate climate, like that of France. *The people* are tall and well formed, and more civilized than any others in Australia. Christian missions are now established among them.

POLYNESIA.

I. 1810. *Polynesia* consists of countless small islands, scattered over the ocean like the stars in the sky, sometimes single, and sometimes collected in ranges or clusters. Some are high *mountains*, and others are *low coral rocks*.

I. *M. of O.* — What are the chief groups of islands in Polynesia N. of the equator? What S. of the equator? Which are some of the most eastern islands?

II. 1811. The islands of Polynesia have a delightful *climate*. They *produce* the bread-fruit tree and the taro root; and these, with the flesh of the hog and the dog, furnish the chief food of the natives.

II. To what latitude N. and S. do the islands of Polynesia extend? In what zone do they lie? What groups of islands are nearest to Asia, N. of the equator? What to N. America? To S. America? Which are the

most northern islands named? The most eastern? The most southern? The most western?

III. 1812. *The natives* of Polynesia are more mild and polite than most barbarous nations, but dishonest and corrupt in their *character*. Human *sacrifices*, and the destruction of infants, were formerly general among them.

ISLANDS NORTH OF THE EQUATOR.

II. 1813. The Pelew Islands, and the Carolines, are remarkable for their fine climate and delicious fruits.

1814. The Ladrones, or Isles of Robbers, received their name from the piracy practised by the people.

1815. The Sandwich Islands are the most important group North of the equator. *Hawaii*, or Owhyhee, is the largest, and almost as large as the state of Connecticut. Its mountains rise to the height of 18,000 feet, and contain Kilauea, one of the most remarkable volcanoes in the world. These islands are *the resort* of ships engaged in the whale and seal fisheries, in the Pacific Ocean; and they *furnish* large quantities of sandal wood for the Chinese trade.

III. 1816. The natives practise *agriculture*, and exhibit much ingenuity in some *manufactures*. They have *improved* in the arts by intercourse with Europeans, and have adopted the Christian religion. The king has formed a small *navy*, and carries on a profitable *trade* with foreigners. His *palace*, mode of living, and dress, are in the European style. A large part of the population now attend *the schools* established by American missionaries.

ISLANDS SOUTH OF THE EQUATOR.

II. 1817. The Friendly Islands, including the Fejee, and several other detached islands, are low coral islands, of which *Tongataboo* is the largest.

1818. The Navigator's Isles are the most important and fertile group yet discovered in Southern Polynesia. *The natives* are uncommonly tall and stout, and very ferocious; but they are industrious, and ingenious in some of their *manufactures*.

1819. The Marquesas are said to be distinguished for the beauty of the people. They are now possessed by the French.

1820. The Society Isles, of which *Tuhiti* (Otaheite) is the largest, are fertile and beautiful, but none of them are so large as Hawaii. These islands present *the first example* of a nation converted to Christianity in modern times by the labors of Christian missionaries. *The people* are now as much distinguished by their regard for religion and morality as they once were for idolatry and immorality. They have *schools*, *churches*, and a system of good *laws*, and are advancing in knowledge and arts.

II. *M. of O.* — What are the principal of the Sandwich Islands? (*Honolulu, the capital, is on the Island of Oahu.*) What are the chief of the Society Islands? What others do you find? What islands are named among

the Marquesas? Where is Pitcairn's Island, which was settled by English sailors and Tahitians?

III. CITIES OF OCEANICA.

1821. *The native towns of Oceanica* generally consist of huts of bamboo or cane, thatched with leaves. They are often removed, or destroyed by fire, as in Southern Asia, and entirely deserted, in a few months.

1822. *The settlements of Europeans* resemble the cities of Europe, but sometimes contain fine buildings, and palaces, mingled with native huts.

1823. *Batavia*, the Dutch capital of Java, and of the Dutch possessions, is a city of the first rank, and the largest and most important in Oceanica, with extensive commerce. Its streets are lined with trees, and traversed by canals, like those of the cities of Holland. *Banjermassing*, in Borneo, and *Macassar*, in Celebes, are chiefly important as the residence of the Dutch governors of these islands.

1824. *Manilla*, the capital of the Philippine Islands, is a large, well-built city, surrounded with walls, and has extensive commerce.

1825. *Acheen*, the capital of the chief native kingdom in Sumatra, consists of 3000 bamboo houses, built on posts, in the midst of a forest of cocoa-nut, banana, and other tropical trees. It is traversed by a river, covered with small vessels, engaged in active commerce.

1826. *Sydney*, the chief town and centre of trade for Australia, has one of the finest harbors in the world, and is important for commerce, and the whale fishery. It contains two colleges and numerous schools.

1827. *Hobart's Town*, or *Hobarton*, the capital of Van Diemen's Land, also has a fine harbor, and is a place of considerable trade and importance.

1828. *Honolulu*, the capital of the Sandwich Islands, consists chiefly of native huts, but has churches, schools, and other public edifices, which are well built. Its commerce, both in foreign and native ships, is considerable; and it is the most important town in Polynesia.

1829. *Papeete*, the capital of Tahiti, or Otaheite, is built like Honolulu, but has much less commerce. *Eimeo* is the centre of civilization in the Society Islands, and has an academy, a printing office, and manufactories.

III. TRAVELS IN OCEANICA.

1830. Your travels in Oceanica must be chiefly by sea. If you embark in one of our whaling ships, you will go round Cape Horn, and finally to the Sandwich Islands; and thence you may find ships going round among the other islands, and back by the Cape of Good Hope. Describe the course you will take to visit the principal islands, and mention what you shall find that is interesting in each.

ASTRONOMY.

1. On every side of the Earth we see a multitude of stars above us, most of which are called *fixed stars*, because they do not appear to change their situation.

Most of them were classed in constellations, or clusters, like that of the Great Bear, (p. 26,) several thousand years ago, and still remain in the same places, and form the same lines. Only a few thousand stars can be seen from the Earth by the naked eye; but by the use of telescopes, it is found that there are many millions. They are at an immense distance from us, and are *supposed* by many to be suns, enlightening other worlds.

2. Scattered among these stars, we may perceive *a few, distinguished by their steady light*, which change their place continually, and return at given periods in the same path. They are hence called *planets*, or wanderers; and, when examined with telescopes, they are found to be globes, like our Earth.

3. On *further examination*, it becomes evident that the Earth is also a planet, moving with ten others around the Sun, and forming a part of the Solar System, represented in p. 346.

4. *The Earth* holds a middle place among the planets; being at *the distance* of 95 millions of miles from the Sun, and *moving round it* in one year, or about 365 days 6 hours.

5. The revolution of the Earth round the Sun is called *the annual, or yearly revolution*, and causes the change of seasons. Its orbit, or path among the fixed stars, is called the *ecliptic*.

6. Besides this revolution, *the Earth rotates*, or turns like a top, or a wheel, on its own axis, once in twenty-four hours. This motion causes day and night, and is called *the diurnal, or daily revolution*.

7. In consequence of the annual and diurnal motions of the Earth, *the Sun appears to move* round in the ecliptic every year, and to revolve round the Earth every day. But we seem to ourselves to be at rest, and *the Sun and stars appear to be in motion, only because* we partake of the motion of the Earth, as we do of the rapid motion of a ship or carriage, when every thing we see appears to be moving by us.

8. *We shall find, on calculation*, that we are moving round with the Earth in its orbit, at the rate of more than 1000 miles a minute; and that we are turning with it on its axis, with a velocity of nearly 12 miles in a minute.

THE SOLAR SYSTEM.

9. The situation and orbits of the planets are imperfectly represented in the figure on page 346.

10. *The Sun* is a vast body, about 1,400,000 times as large as the Earth, and communicates light and heat to the whole solar system. It turns on its axis in 25½ days, as may be seen by observing the spots on its surface with a telescope.

11. There are eleven primary planets in the system. The seven principal planets revolve round the Sun in the following order: Mercury, Venus, the Earth, Mars, Jupiter, Saturn, and Herschel, or Uranus. Four others, usually called asteroids, — Ceres, Pallas, Juno, and Vesta, — have been discovered revolving between the orbits of Mars and Jupiter.

12. *Mercury* is the smallest planet, so near the Sun that it is seldom seen.

Venus is a bright star, nearly as large as the Earth. When it rises a short time before the Sun, it is called the morning star; when it sets soon after the Sun, the evening star. Both these are nearer than the Earth is to the Sun.

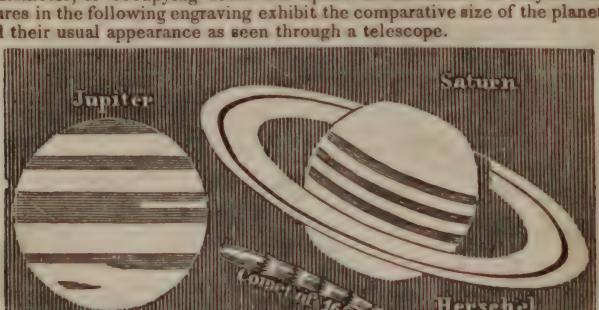
(190) *The Solar System.*

13. *Mars* is a planet much smaller than the Earth, of a red, fiery color, and visible to the naked eye. *Jupiter* is nearly 1300 times larger than the Earth, and the largest of all the planets. It is usually surrounded with cloudy belts. *Saturn* is 1000 times larger than the Earth. It is encircled by a broad, flat ring, divided into two portions, which revolve round it like satellites or moons. *Uranus, or Herschel*, the most distant of the planets, is 80 times as large as the Earth, but is seldom seen without a telescope.

14. All the planets have motions similar to those of the Earth, which are exhibited in the following table of their size, situation, and motions.

Planets.	*Diameter in Miles.*	*Distance from the Sun.*	*Day, or Rotation on the Axis.*	*Year, or Revolution round the Sun.*	*Hourly Motion in Orbit in Miles.*
Mercury,	3,140	37,000,000	24 h. 52 m.	88 days, or 3 mo.	111,000
Venus,	7,700	68,000,000	23 " 21 "	224 " or 7½ "	81,000
Earth,	7,912	95,000,000	23 " 56 "	365 " or 1 year.	68,000
Mars,	4,200	142,000,000	24 " 39 "	687 " or 2 "	56,000
Jupiter,	89,000	485,000,000	10 " "	4,332 " or 12 "	20,000
Saturn,	79,000	890,000,000	10 " 29 "	10,659 " or 29 "	22,000
Uranus,	35,000	1,800,000,000	.....	30,686 " or 84 "	15,000

15. *The asteroids* are very small. Ceres is estimated to be only 160 miles in diameter, or occupying about the space of the Island of Hayti. The figures in the following engraving exhibit the comparative size of the planets, and their usual appearance as seen through a telescope.



(191) *Comparative Size and Appearance of the Planets.*

16. There are 18 *secondary planets*, or moons, revolving round these primaries, of which the Earth has 1, Jupiter 4, Saturn 7, and Herschel 6. Our moon is only 2180 miles in diameter. It is 240,000 miles from the Earth, and revolves round it in 27½ days.

17. Besides these, more than 400 *comets*, or stars with bright trains, have been seen revolving round the Sun. They move irregularly, sometimes coming very near the sun, and then flying off beyond the most distant planet. Only a few have been known to return, and at intervals of from 3 to 575 years.

18. *The Solar System is an exhibition of* Divine Wisdom and Power surpassing our conception. But on comparing the situation and motions of the Earth with those of the other planets, we shall find *peculiar evidence of providential design*, in placing it in the middle of the system, and thus preserving it from the extremes of light and darkness, of heat and cold, and of the length of seasons, which would be injurious, if not destructive, to beings constituted like ourselves.

DAY AND NIGHT.

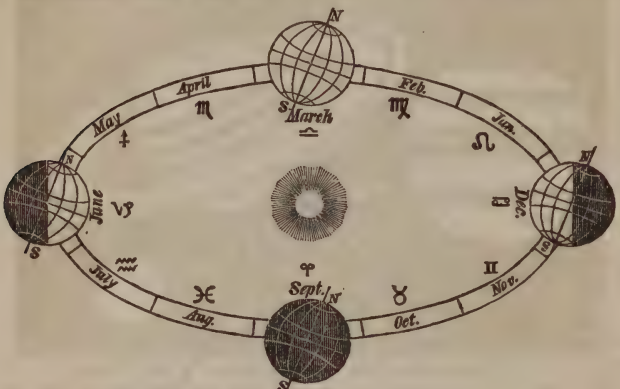
19. *The side of the Earth which is turned towards the Sun* is in the light, and has day, while the opposite side is in the shade, and has night. *Hence*, as the Earth turns on its axis once in 24 hours, each place has day and night alternately; but they are not of equal length in all parts of the Earth.

20. *Places on the equator* are exactly half the time in the light and half the time in the shade. The days and nights therefore are always equal, or 12 hours each, and the Sun always rises and sets at 6 o'clock.

21. *The ecliptic or orbit of the Earth passes* through certain constellations, or clusters of stars in the heavens, (*see* ¶ .;) and it is among these stars that the Sun appears to move round once every year.

22. *The equator is drawn upon the Earth* at equal distances from the two poles; and therefore *the axis of the Earth* is perpendicular to the equator.

23. If the equator be extended to the heavens, it will be found that the ecliptic runs across the equator in two points, which are called *the equinoctial* points; and therefore *the axis of the earth stands obliquely* to the ecliptic, as in the following figure. It extends 23° 28′ on each side of the equator to the tropics. (*See* p. 32, ¶ 35.)



(192) *The Earth in its Orbit.*

At the tropics the ecliptic turns, and the Sun seems to turn, towards the equator. Hence the name, from the Greek word *trepo*, to turn. The large circle in this figure represents the ecliptic, with the names of the months; and the Earth is drawn with the circles upon it, as it stands in different parts of its orbit, in March, June, September, and December. The North Pole, which always points to the North Star in the heavens, (*see* p. 26,) is represented at N. in each figure of the Earth, and the South Pole at S.

24. The Sun appears in the equinoctial points about the 20th of March and the 22d of September; and then it shines on each pole at the same time, as in figure 190. *At these periods*, which are called *the equinoxes*, every place on the Earth is half the time in the light, and half the time in the shade, and the days and nights are equal all over the world.

Equinox is from the Latin word *æquus*, equal, and *nox*, night.

25. But as the axis of the Earth is not perpendicular to the ecliptic, *each pole* remains a long time in the light during the summer, *after the spring equinox*, and an equal length of time in the shade in winter, *after the autumnal equinox*, as may be seen in the point representing the North Pole, in figure 190.

26. In our winter, as in December, the North Pole is in the shade for six months, and the South Pole in the light, and cannot change, in this respect, as the earth turns. In our summer, as in June, the North Pole must be constantly in the light, and the South Pole constantly in the shade.

27. *From March to September*, or in our summer, it will also be seen in the figure that the northern hemisphere is more than half enlightened. Hence, as the Earth turns on its axis, every place in the northern hemisphere must be more than half the day in the light, or will have days more than 12 hours long. At the same time, the southern hemisphere will be less than half enlightened, and every place in it will have days of less than 12 hours.

28. *From September to March*, or in our winter, the northern hemisphere is less than half enlightened, and the days are less than 12 hours; while the southern hemisphere is more than half enlightened, and has the longer days of summer.

29. *When the Sun is over either of the tropics*, (as in June or December,) it shines 23° 28′ beyond the nearest pole, causing day to all countries within that distance of the pole for 24 hours at least, and leaving the countries within the same distance of the opposite pole, at least 24 hours in darkness. The parallels of latitude drawn at this distance from the poles, are called the polar circles — one, the North polar, or Arctic Circle, and the other, the South polar, or Antarctic Circle. (*See* p. 32, ¶ 36.)

30. In going *from the equator to the polar circles*, the days of summer are from 12 to 24 hours, increasing in length with the latitude. *From the polar circles to the poles*, the days lengthen into weeks and months. In latitude 67°, the longest day is one month; in latitude 70°, two months; in latitude 80°, four months; and at the poles, there is six months' light.

31. *In the opposite hemisphere*, or *at the opposite season*, the nights have the same length; the days are proportionally shortened; and the pole has six months' darkness.

The length of the longest day or night, for every ten degrees of latitude, is marked on the left-hand margin of the Chart of the World.

SEASONS.

32. *The sun is higher at noon in summer* than in winter, and shines more directly upon us, *because* (as may be seen in figure 190) the northern hemisphere, in which we live, is turned towards the Sun from March to September. At the same time the days are longer; and both causes give us most heat at this season. (*See Preparatory Lessons*, p. xxi. ¶ 68 *and* 69.)

33. *In our cold months*, or from September to March, the northern hemisphere is turned away from the Sun, the days are shorter, and the heat is least.

34. *But in our summer, the southern hemisphere* is turned away from the Sun, and has short days, which produces winter; *and in our winter*, it is turned towards the Sun, and has long days and summer heat. Thus we see that *the two hemispheres* have opposite seasons.

35. Hence we find that *the heat of a place depends* chiefly on its distance from the equator. *The Frigid Zones*, around the poles, are the coldest parts of the Earth; *the Torrid Zone*, near the equator, is the warmest; and *the zones between these* are Temperate Zones. (*See* p. 33.)

DIFFERENCE OF TIME.

36. As the Sun passes from East to West, over the meridians, *it is noon at the places East of us* sooner than with us, and all the hours are earlier. In places West of us, noon and all the hours are later. (*See Preparatory Lessons*, p. xx. ¶ 60—61.)

37. As the Earth turns on its axis in 24 hours, *the Sun appears to pass over 360 degrees of longitude* in 24 hours, or 15 degrees every hour. Hence, *when we go 15 degrees East or West, we find the time* one hour earlier or later than at the place we left; and *if we find this difference of time*, we know that we have moved 15 degrees. It is in this way that mariners find the difference of longitude at sea. (*See* p. 44, *Prob.* iv. *and* v.)

The Geographical Clock, on the next page, consists of a polar projection of the northern hemisphere, of which the meridian of Washington is the central meridian. Some of the most important places are marked on it; and the names are placed in a circle around it, in the direction of their respective meridians.

☞ As the southern part of North America is at the top of the map, places *East of Washington* are at the *left hand*, and those *West* of it at the *right hand*.

On the outer circle is marked the hour of the day at each meridian, when it is 12 o'clock at Washington. The hours run from right to left, at the distance of 15 degrees, because the earth revolves in this direction 15 degrees in an hour.

1. *To find the time at any place, when it is* 12 *o'clock at Washington.*

Find the place on the Geographical Clock, and the figure opposite will show the hour. If it is *east* of Washington, it will be some hour *after* 12; if *west*, *before* 12.

Thus it will be seen, that at London, which is 5 hours *east* of Washington, it is 5 o'clock *after noon*, when it is noon at Washington; and at Beering's Straits, which is 6 hours *west*, it is 6 o'clock *before noon*.

2. *To find the time corresponding to any hour at Washington.*

Count the number of hours between the given place and Washington. If the place is *east* of Washington, *add* this number to the time at Washington; if *west*, *subtract* it.

Thus, Owhyhee is $5\frac{1}{2}$ hours west of Washington. When it is 6 o'clock in the morning at Washington, subtract $5\frac{1}{2}$, and you will find it is $\frac{1}{2}$ of an hour after midnight at Owhyhee. Rome is 6 hours *east* of Washington—and Siam is 12—add this to the time at Washington, and you will find it is, at the same hour, 12 o'clock at noon at Rome, and 6 o'clock in the evening at Siam.

Questions.—What is the difference of time between Washington and New Orleans? Is New Orleans East or West of Washington? Is the hour there earlier or later than at Washington? How does it differ from the hour at Boston?

When it is noon at Washington, what time is it at Owhyhee? Where is it midnight at the same time? Where is it six o'clock in the morning? Where is it six o'clock in the evening? What time is it then at Canton? At Calcutta? At Bombay? At Ispahan? At Constantinople? At Jerusalem? At London and Paris? At Madeira? At Rio Janeiro? At Buenos Ayres? At Cincinnati? At Mexico? Astoria? New Zealand? Botany Bay?

Supposing the hour of breakfast to be 6 o'clock, of dinner 12, and of supper, 6 in the evening, what are the people of Rome doing when the president is breakfasting at Washington? What are they doing in Siam? Where are they probably sleeping? What is the difference of time between Otaheite and Boston?

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